

BULLETIN

OF

MISCELLANEOUS INFORMATION.

Nos. 175-177.] JULY—SEPTEMBER.

[1901.

I.—DIAGNOSES AFRICANÆ, XIII.

698. *Rhopalandria lobata*, C. H. Wright [Menispermaceæ]; a *R. Cumminsii*, Stapf, et *Dioscoreophyllo strigoso*, Engl. (an *Rhopalandria* species?), foliis trilobatis hispidis recedit.

Caulis scandens, sulcatus, setis 2 lin. longis vestitus. *Folia* trilobata, utrinque hispida, 3 poll. longa, 3 poll. lata, lobis acuminatis, marginibus ciliatis; petioli $2\frac{1}{2}$ poll. longi, tenues, setis præditi. *Pedunculus* 3 poll. longus, dense setosus; racemus 3 poll. longus, floribus fasciculatis; bracteæ 1 lin. longæ, apice setosae, ramentaceæ; pedicelli $1\frac{1}{2}$ –2 lin. longi. *Sepala* flava, oblonga, obtusa, $1\frac{1}{2}$ –2 lin. longa, $\frac{3}{4}$ lin. lata. *Stamina* generis. *Flos* ♀ ignotus. *Fructus* ruber (fide Johnson).

GOLD COAST. W. H. Johnson, 102.

Including the above, two species of *Rhopalandria* are known both* from male specimens. Four species of Engler's genus *Dioscoreophyllum* are known, two from male and two from female plants. It is very probable that further material will shew that they are congeneric.

699. *Hugonia obtusifolia*, C. H. Wright [Linaceæ]; affinis *H. platysepalæ*, Welw., sed foliis obtusis nervis paucioribus differt.

Frutex scandens. *Folia* obovato-lanceolata, obtusa, subcrenata, glabra, $5\frac{1}{2}$ poll. longa, $2\frac{1}{2}$ poll. lata, nervis utrinque 10–12; petiolus 5 lin. longus. *Racemi* pauciflori ad axillas foliorum superiorum; pedicelli 2 lin. longi; bracteolæ subulatæ. *Sepala* 2 exteriora ovata, $1\frac{1}{2}$ lin. longa, extus rufo-pubescentia, 3 interiora rotundata, membranacea, glabra, $2\frac{1}{2}$ lin. longa. *Petala* obcordata, flava, 6 lin. longa, 4 lin. lata, ante anthesin extus rufo-pubescentia. *Filamenta* 2 lin. longa; antheræ rotundatæ. *Ovarium* rufo-pubescentia; styli 5 lin. longi.

CAMEROONS. Batanga, Bates, 330.

700. *Geranium Brycei*, N. E. Brown [Geraniaceæ]; affine *G. cinereo*, Harv., sed caule fruticoso stipulis multo majoribus distinguitur.

Frutex 4-5-pedalis, ramulis retrorsum albo-villosis. *Folia* palmatisecta, petiolata, superiora 1 poll. diam. (inferiora non vidi), supra appresse sericeo-pubescentia, subtus albo-tomentosa; segmenta 5, subbipinnatifida; stipula 5-6 lin. longa, 3-4-fida, segmentis lineari-lanceolatis acutis. *Pedunculi* $1\frac{1}{4}$ -2 poll. longi, 1-2-flori; pedicelli $\frac{3}{4}$ - $1\frac{1}{4}$ poll. longi. *Sepala* 3- $3\frac{1}{2}$ lin. longa, $1\frac{1}{2}$ lin. lata, oblonga, mucronata. *Corolla* 10 lin. diam., cœruleo-purpurea.

SOUTH AFRICA. Basutoland, on Machacha Mountain, in a moist kloof, alt. 9500 ft., *Right Hon. J. Bryce*.

701. *Geranium multisectum*, N. E. Brown [Geraniaceæ]; proximum *G. incano*, Linn., sed foliis minoribus et pedicellis glandulosis distinguitur.

Herba 4-5 poll. alta, minute appresse pubescens. *Folia* 5-8 lin. diam., palmatipartita; segmenta bipinnatipartita, lobulis $\frac{3}{4}$ - $1\frac{1}{2}$ lin. longis $\frac{1}{4}$ - $\frac{1}{2}$ lin. latis linearibus subobtusis; petioli 1- $1\frac{1}{2}$ poll. longi. *Pedunculi* $1\frac{1}{2}$ - $3\frac{3}{4}$ poll. longi, plerumque 2-flori; pedicelli 6-12 lin. longi. *Sepala* 3 lin. longa, $1\frac{1}{4}$ lin. lata, oblonga, mucronata. *Corolla* 10-11 lin. diam., rubro-purpurea.

SOUTH AFRICA. Basutoland: Machacha Mountain, alt. 9000 ft., *Right Hon. J. Bryce*.

702. *Buchenrœdera glabriflora*, N. E. Brown [Leguminosæ-Genisteæ]; affinis *B. tenuifolia*, Eckl. & Zeyh., sed calycis dentibus brevioribus et corolla glabra differt.

Frutex humilis, ramulis foliisque argenteo-sericeis. *Folia* brevissime petiolata, trifoliolata; foliola 2-3 lin. longa, $\frac{1}{4}$ lin. crassa, tereti-subulata, supra angustissime canaliculata; stipulæ nullæ. *Flores* 2-3 ad apices ramulorum brevissimorum fasciculati. *Pedicelli* 1 lin. longi, sericeo-pubescentes. *Calyx* campanulatus, subæqualiter 5-dentatus, subtomentosus; tubus $1\frac{1}{2}$ lin. longus; dentes vix $\frac{1}{2}$ lin. longi, late deltoidei, acuti. *Corolla* purpurea, glabra; vexillum $4\frac{1}{2}$ lin. longum, 4 lin. latum, orbiculatum, unguiculatum; alæ $\frac{1}{4}$ lin. longæ, $1\frac{1}{2}$ lin. latæ, oblongæ, obtusæ, unguiculatæ; carina $4\frac{1}{4}$ lin. longa, $1\frac{1}{2}$ lin. lata, obtusa. *Legumen* immaturum villosum.

CAPE COLONY. Queenstown Division: mountain sides near Queenstown, alt. 4000 ft., *Galpin*, 1596.

703. *Melolobium Burchellii*, N. E. Brown [Leguminosæ-Genisteæ]; affinis *M. collino*, Eckl. & Zeyh., sed ubique patule pubescens, et foliolis haud emarginatis differt.

Frutex humilis, ramosus, spinescens, ubique corolla excepta dense patule pubescens, eglandulosus. *Rami* subelongati, graciles, ascendentes. *Folia* trifoliolata, petiolata; petiolus 1-2 lin. longus, subteres, supra canaliculatus; foliola $1\frac{1}{4}$ -3 lin. longa, $\frac{1}{2}$ -1 lin.

lata, obovata, obtusa, minute subapiculata, plus minus complicata; stipulæ 1 lin. longæ, $\frac{1}{2}$ – $\frac{2}{3}$ lin. latæ, oblique affixæ, ovatæ vel semi-hastatæ, acutæ. *Flores* 2–3 prope apices ramulorum laxè racemosi, brevissime pedicellati, bracteati, pedicellis bibracteolatis. *Bractea* $1\frac{1}{4}$ – $1\frac{1}{2}$ lin. longæ, $\frac{1}{2}$ – $\frac{2}{3}$ lin. latæ, ovato-lanceolatæ; bracteolæ bracteis subæquilongæ, sed angustiores. *Calyx* bilabiatus; tubus $1\frac{1}{8}$ lin. longus; labium superius ad medium bifidum, dentibus subfalcatis acutis; labium inferius concavum, apice trifidum, dentibus angustis acutis. *Corolla* glabra, lutea; vexillum 3 lin. longum, $1\frac{1}{2}$ – $1\frac{3}{4}$ lin. latum, orbiculatum, unguiculatum; alæ 3 lin. longæ, $\frac{2}{3}$ lin. latæ; carina $2\frac{1}{8}$ lin. longa, obtusa. *Legumen* 5 lin. longum, $1\frac{1}{2}$ lin. latum, oblongum, pubescens.

CAPE COLONY. Colesberg Division: at Naauw Poort, *Burchell*, 2776.

704. *Crotalaria minor*, *C. H. Wright* [Leguminosæ-Genistææ]; *C. natalitiæ*, Meissn., proxima, sed omnibus partibus minor.

Caulis leviter striatus, primum pubescens, tandem glaber. *Folia* digitatim trifoliolata; foliola obcuneata, 4–6 lin. longa, supra glabra, subtus ad costam appresse hirsuta. *Flores* ad apices ramorum lateralium racemose dispositi; pedicelli 1 lin. longi. *Calyx* campanulatus, extus sparse pilosus, 2 lin. longus; lobi subulati. *Corolla* alba; carina 4 lin. longa. *Stamina pistillumque* generis.

BRITISH CENTRAL AFRICA. Shiré Highlands, Mount Mlanji, *Mahon*.

705. *Vigna nuda*, *N. E. Brown* [Leguminosæ-Phaseoleæ]; species insignis, aphylla.

Herba 6–8 poll. alta, basi ramosa, aphylla. *Caules* $\frac{3}{4}$ – $3\frac{1}{2}$ poll. longi, erecti. *Pedunculi* sæpe radicales, $1\frac{3}{4}$ –7 poll. longi, erecti, minute et parce retrorsim pubescentes, 2–3-flori. *Pedicelli* $\frac{1}{2}$ –1 lin. longi. *Calyx* $3\frac{1}{2}$ lin. longus, late campanulatus. 5-dentatus, parce puberulus; dentes 1– $1\frac{1}{4}$ lin. longi, deltoidei, acuti. *Corolla* 9–10 lin. longa; vexillum suborbiculare, 1 poll. latum; carina valde incurva, obtusa.

RHODESIA. Mashonaland, abundant in dry pastures, *Right Hon. J. Bryce*.

706. *Cliffortia alata*, *N. E. Brown* [Rosacæ-Poteriææ]; a speciebus reliquis fructu alato distincta.

Frutex 1– $1\frac{1}{2}$ ped. altus, ramosus. *Folia* fasciculata, trifoliolata, minute pubescentia; foliola 2–4 lin. longa, $\frac{1}{3}$ lin. crassa, teretia, submucronulata. *Flores* axillares, brevissime pedicellati; sepala floris masculini $1\frac{2}{3}$ lin. longa, 1 lin. lata, elliptica, subacuta, apice intra villosulo-callosa, extra glabra; sepala floris feminei similia sed minora. *Fructus* 3–4 lin. longus, 3– $3\frac{1}{2}$ lin. latus, ellipticus, utrinque emarginatus, late bialatus, faciebus cristato-carinatus, albo-tomentosus.

CAPE COLONY. Riversdale Division: on the Karoo plains at Muis Kraal, near Garcias Pass, alt. 1000 ft., *Galpin*, 3925.

707. *Cliffortia Galpini*, N. E. Brown [Rosaceae - Poterieae]; similis *C. juniperinae*, Linn. f., sed foliis brevioribus supra planis nec canaliculatis differt.

Frutex dioicus, dense ramosissimus, ramis adscendentibus cinereis. *Folia* ad apices ramulorum fasciculata, sessilia, trifoliolata; foliola $1\frac{1}{2}$ –4 lin. longa, $\frac{1}{4}$ lin. lata, linearia, mucronata vel acuta, supra plana, dorso obtuse carinata, minutissime serrulata, glabra. *Flores* sessiles, terminales. *Sepala* floris masculi $1\frac{1}{2}$ lin. longa, $\frac{2}{3}$ lin. lata, sepala floris feminei $\frac{2}{3}$ lin. longa, $\frac{1}{3}$ – $\frac{1}{2}$ lin. lata, elliptica vel elliptico-ovata, mucronata, glabra. *Stamina* $1\frac{3}{4}$ lin. longa; filamenta filiformia; antherae didymae, loculis oblongis. *Ovarium* obovoideum, glabrum.

CAPE COLONY. Queenstown Division: Hangklip and Andriesberg Mountains, alt. 6000–6700 ft., Galpin, 1607.

708. *Crassula variabilis*, N. E. Brown [Crassulaceae]; *C. pyramidalis*, Thunb., arcte affinis, sed floribus albis et foliis variabilibus differt.

Planta 3–6 poll. alta, basi ramosa. *Folia* variabilia, 4-faria, dense imbricata vel 1–3 lin. distantia, erecta vel patentia, sessilia, leviter connata, nunc $1\frac{1}{2}$ –2 lin. longa, 1–2 lin. lata, ovata, obtusa, turgida, nunc 2–4 lin. longa, 2– $3\frac{1}{2}$ lin. lata, deltoideo-ovata, acuta, plana vel turgida, viridia, marginibus plus minus brunnea et minutissime papillato-ciliata. *Cymae* parvae, capituliformes, 5–7 florae, subsessiles vel breviter pedunculatae, in paniculam angustam subspiciformem terminalem usque 3–4 poll. longam $\frac{3}{4}$ –1 poll. diam. dispositae, vel interdum subcorymbosae. *Flores* sessiles, conferti. *Bracteolae* 1– $1\frac{1}{3}$ lin. longae, oblongae, obtusae, turgidae, minutissime ciliatae. *Sepala* 1 lin. longa, oblonga, obtusa, turgida, minutissime ciliata. *Corolla* $2\frac{1}{2}$ –3 lin. longa, gamopetala, usque ad medium 4–5-loba; lobi lineares, vix $\frac{1}{2}$ lin. lati, subobtusius, recurvi, albi vel extra rubri. *Stamina* 5, inclusa; filamenta $\frac{1}{4}$ lin. longa, prope apicem tubi affixa; antherae $\frac{1}{3}$ lin. longae, oblongae, luteae. *Glandulae* hypogynae, $\frac{1}{4}$ lin. longae, spathulatae, apice rotundatae, bilobae vel bicurves.

CAPE COLONY. In the Karoo at Matjes Fontein, MacOwan. Described from living plants sent to Kew by Prof MacOwan in 1898.

709. *Cassipourea schizocalyx*, C. H. Wright [Rhizophoraceae]; arbuscula, foliis ovatis acuminatis, calyce fere ad basin diviso.

Rami teretes, glabri. *Folia* $5\frac{1}{2}$ poll. longa, $2\frac{3}{4}$ poll. lata, supra glabra, subtus ad costas appresse pilosa; petiolus 6 lin. longus; stipulae deciduae, interpetiolares, deltoideae, 4 lin. longae. *Flores* 1–3 ad axillas ramulorum. *Calycis* lobi ovati, acuti, valvati, intus sericei. *Petala* 5, spathulata, lacerata, alba, fugacissima; lacinae inflexae. *Stamina* plurima; filamenta filiformia; antherae oblongae, pilosae. *Ovarium* triloculare, extus sericeum; stylus teres; ovula in quoque loculo 2, pendula.

GABOON REGION. Mfoa, Bates, 514,

710. *Pentas Wyliei*, *N. E. Brown*, [Rubiaceæ-Hedyotideæ]; affinis *P. carneæ*, Benth., floribus multo minoribus differt.

Herba elata, ramosa. *Caules* tenuiter subvillosi, internodiis elongatis. *Folia* petiolata, $3\frac{1}{2}$ – $4\frac{1}{2}$ poll. longa, $\frac{3}{4}$ – $1\frac{1}{2}$ poll. lata, late lanceolata, acuta, utrinque tenuiter pubescentia. *Stipulae* 5–7-setosæ, villosæ. *Cymæ* terminales, $\frac{3}{4}$ –1 poll. diam. vel fructu maturo 1 – $1\frac{3}{4}$ poll. diam. *Calycis* lobi valde inæquales, 1–3 lin. longi, $\frac{1}{5}$ – $\frac{2}{3}$ lin. lati, majores lanceolati, acuti. *Corolla* alba; tubus 3–4 lin. longus, superne ampliatus, fauce villosus; lobi vix $1\frac{1}{2}$ lin. longi, ovati, subacuti. *Stamina* inclusa. *Capsula* 2 lin. longa et lata, 8-nervosa, apice dehiscens. *Semina* numerosa, angulata, minute reticulata.

SOUTH AFRICA. Zululand, at Ungoya, alt. 1000–2000 ft., *Wylie in Herb. Wood*, 7590.

711. *Randia purpureomaculata*, *C. H. Wright* [Rubiaceæ-Gardenieæ]; ex affinitate *R. octomeræ*, Benth. et Hook. f. a qua calycis lobis ovatis et corollæ tubo latiore differt.

Frutex scandens, 10–12 ped. altus. *Ramuli* teretes, appresse hirsuti. *Folia* obovata, breviter acuminata, 4 poll. longa, 2 poll. lata, supra glabra, subtus ad nervos hirsuta; petioli 2 lin. longi; stipulae e basi lata subulatæ. *Flores* ad ramulorum apices solitarii. *Calyx* 2 poll. longus, extus sparse hirsutus; lobi ovati, acuminati, 6 lin. lati. *Corolla* luteola, purpureomaculata; tubus $3\frac{1}{2}$ poll. longus, extus dense et appresse hirsutus; lobi 5–7, oblongi, plus minus acuminati. *Antheræ* 1 poll. longæ, paullo exsertæ. *Stylus* breviter hirsutus; stigma clavatum, 1 poll. longum.

WEST AFRICA. Old Calabar, *Holland*, 8.

712. *Felicia lutea*, *N. E. Brown* [Compositæ-Asteroideæ]; ab omnibus speciebus ligulis luteis facile distinguitur.

Herba perennis, $\frac{1}{2}$ –1 ped. alta, ramosa. *Caules* erecti, patule pubescentes. *Folia* alterna et opposita, plerumque 5–7 lin. longa, $\frac{3}{4}$ – $1\frac{1}{2}$ lin. lata, majora usque $1\frac{1}{4}$ poll. longa, 2–3 lin. lata, sessilia, linearia vel oblanceolata, obtusa, basi plus minus attenuata, utrinque patule pubescentia, vel inferiora supra subglabra. *Pedunculi* terminales, solitarii, monocephali, $1\frac{1}{2}$ – $2\frac{1}{2}$ poll. longi, patule pubescentes. *Capitula* $\frac{1}{2}$ poll. diam. *Involucri* squamæ 2-seriatæ, subæquales, 2 lin. longæ, $\frac{1}{3}$ – $\frac{1}{2}$ lin. latæ, lanceolatae, acutæ. *Ligulae* luteæ, $1\frac{1}{2}$ lin. longæ, lineares, obtusæ. *Flores disci* $1\frac{1}{2}$ lin. longi, tubulosi, 5-dentati, lutei. *Pappi* setæ scabridæ, 1-seriatæ. *Achenia* obovata, valde compressa, marginata, parce pubescentia.

SOUTH AFRICA. Zululand, at Amatikulu, below 1000 ft., *Wylie in Herb. Wood*, 7592.

This plant undoubtedly belongs to the genus *Felicia*, but is the only one yet recorded in which the ray-florets are yellow. In appearance it resembles *F. erigeroides*, DC., but it is not so woody.

713. *Helichrysum plantaginifolium*, *C. H. Wright* [Compositæ-Inuloidæ]; *H. quinquenervi*, Less., affine, differt foliis longe petiolatis subtus tenuiter albo-arachnoideis supra sublævibus.

: *Caulis* erectus, suffruticosus, striatus, tenuiter albo-arachnoideus, 3-4-pedalis. *Folia* late ovato-lanceolata, basi rotundata, deinde in petiolos decurrentia, 5-7-nervia, subtus tenuiter albo-arachnoidea, supra glabrescentia, marginibus scabris, 6 poll. longa, 4 poll. lata; petioli 6 poll. longi, alati. *Capitula* pluria, corymbosa, 3 lin. diam.; bracteæ oblongæ, obtusæ, dilute flavæ.

BRITISH CENTRAL AFRICA. Namasi, *Cameron*, 6.

714. *Macowania glandulosa*, *N. E. Brown* [Compositæ-Inuloidæ]; *M. revolutæ* Oliv. similis, differt foliis supra glabris glanduloso-punctatis.

Frutex ramosus, ramis parce arachnoideis et piloso-glanduliferis. *Folia* 6-13 lin. longa, $\frac{3}{4}$ -1 lin. lata, ascendunt, sessilia, linearia, acuta, supra glabra, glanduloso-punctata, subglutinosa, subtus albo-tomentosa, marginibus revolutis. *Capitula* solitaria, terminalia, sessilia, 9-10 lin. diam., multiflora, radiata. *Involucrum* campanulati bracteæ 4-seriatæ, lineares, acuminatæ, subciliolatæ, dorso glanduloso-pubescentes et viscidæ, apice fusco-maculatæ; interiores 5 lin. longæ, $\frac{2}{3}$ - $\frac{3}{4}$ lin. latæ; exteriores gradatim minores. *Receptaculum* convexum, alveolatum. *Flores radii* 20-24, uniseriati; corolla 6 lin. longa, 1 lin. lata, lineari-ligulata, apice minute bifida, involucrum excedens, lutea. *Flores disci* numerosi; corolla 3-3 $\frac{1}{4}$ lin. longa, tubulosa, superne ampliata, breviter 5-dentata, glabra, lutea, *Antheræ* caudato-sagittatæ. *Pappi* setæ corollam subæquantes, uniseriatæ, scabridæ, persistentes. *Ovaria* dense sericeo-pubescentia.

NATAL: on the top of Tabamhlopi Mountain, alt. 6000-7000 ft., flowering in February, *Evans*, 412; Langalibalele's Location, *Fannin*, 2013.

Mr. Evans describes this as a "round shrub" on his label, but does not state its size.

715. *Macowania pulvinaris*, *N. E. Brown* [Compositæ-Inuloidæ]; proxima *M. revolutæ*, Oliv., foliis capitulisque minoribus omnino recedit.

Fruticulus hemisphæricus, densissime ramosus, 1 ped. altus. *Folia* conferta, 3-4 lin. longa, $\frac{1}{3}$ - $\frac{1}{2}$ lin. lata, linearia, glanduloso-scabrida, dorso vittis 2 albo-tomentosis instructa. *Capitula* terminalia, solitaria, radiata, 5 lin. diam. *Pedunculus* 1-1 $\frac{1}{2}$ lin. longus, albo-tomentosus. *Involucrum* squamæ lineares, acuminatæ, imbricatæ, interiores 3-4 lin. longæ, $\frac{1}{2}$ lin. latæ, dorso subglandulosæ. *Corolla radii* 4 lin. longa, ligulata, lutea; disci 2 lin. longa, lutea. *Achenia* pubescentia.

CAPE COLONY. Queenstown Division: on the summit of Andries Berg, near Bailey, growing among rocks, forming a very dense rounded cushion, alt. 6800 ft., *Galpin*, 2258.

716. *Senecio viscidus*, *N. E. Brown* [Compositæ-Senecionideæ]; affinis *S. glutinoso*, Thunb., capitulis discoideis cæruleis differt.

Herba 10–12 poll. alta, glutinoso-pubescent, foliosa. *Folia* $1\frac{1}{4}$ –3 poll. longa, 6–14 lin. lata, petiolata, oblonga, pinnatisecta, basi angustata; lobi utrinque 3–5, paucidentati vel pinnatifidolobulati, $1\frac{1}{2}$ – $6\frac{1}{2}$ lin. longi, $\frac{3}{4}$ –5 lin. lati; petioli basi plus minus auriculati. *Capitula* laxè corymbosa, pedunculata, 4 lin. longa, 3 lin. diam., discoidea, cærulea, 18–20-flora. Involucrum cylindricum, basi bracteolis parvis subulatis paucis calyculatum; bracteæ 10–13, lineares, subulato-acuminatæ. *Corolla* tubulosa, 5-dentata, ad medium ampliata, glabra; tubus 3 lin. longus; dentes $\frac{1}{2}$ lin. longi, anguste ovati, apice tuberculato-incrassati, reflexi. *Achaenia* striata, glabra.

NATAL. Byrne, alt. 4000 ft., *Wood*; Van Reenens Pass, alt. 5000–6000 ft., *Wood*, 5607.

717. *Euryops floribundus*, N. E. Brown [Compositæ-Senecionideæ]; affinis *E. pedunculato*, N. E. Br., pedunculis triplo brevioribus facile distinguitur.

Frutex 3–5 ped. altus, ramosus, omnino glaber. *Folia* 1 – $2\frac{1}{4}$ poll. longa, supra medium furcata vel trifida, lobi 3–10 lin. longi, $\frac{1}{3}$ lin. lati, lineari-subteretes, acuti. *Pedunculi* ad apices ramorum corymbosi, $1\frac{1}{4}$ – $2\frac{1}{4}$ poll. longi, graciles. *Capitula* radiata, $\frac{1}{2}$ poll. diam., lutea. *Involucrum* hemisphæricum, 8–9-lobatum; lobi ovati, subacuti, trilineati. *Flores* radii 3 lin. longi, ligulati, obtusi; flores disci $1\frac{1}{2}$ lin. longi, tubulosi, 5-dentati; dentes ovati, acuti, reflexi. *Pappi* setæ copiosæ, scabridæ, exteriores arcuè reflexæ.

CAPE COLONY. Queenstown Division: in valleys near Queenstown, alt. 3500 ft., *Galpin* 1536.

718. *Osteospermum glabrum*, N. E. Brown [Compositæ-Calenduloideæ]; proximum *O. scabro*, Thunb., sed foliis lævibus floribusque majoribus distinctum.

Frutex $1\frac{1}{2}$ –2 ped. altus, omnino glaber. *Rami* conferti, stricti, erecti, dense foliosi. *Folia* alterna, 4–6 lin. longa, $\frac{2}{3}$ lin. lata, linearia, acuta, mucronata, dorso carinata, erecta, laxè imbricata. *Pedunculus* terminalis, 2–3 lin. longus, foliis brevior. *Capitulum* solitarium, $1\frac{1}{4}$ poll. diam. *Involucrum* bracteæ 12–14 biseriatæ, 5–6 lin. longæ, $1\frac{1}{4}$ – $1\frac{1}{3}$ lin. latæ, lanceolatæ, acuminatæ, dorso scabridæ. *Flores* radii 7 lin. longi, 2 lin. lati, lineari-oblongi, apice tridentati, lutei; flores disci 2 lin. longi, tubulosi, 5-angulares, breviter 5-dentati, angulis scaberulis.

CAPE COLONY. Riversdale Division: on the summit of Muis Kraal Ridge, near Garcias Pass, alt. 1500 ft., *Galpin*, 4217.

719. *Ursinia alpina*, N. E. Brown [Compositæ-Arcotodeæ]; affinis *U. apiculatæ*, DC., foliis non albo-apiculatis et scapo multibracteato differt.

Herba perennis. *Folia* radicalia, conferta, $\frac{1}{2}$ – $1\frac{1}{4}$ poll. longa, supra medium pinnatisecta, glabra, glanduloso-punctata; lobi 2–5-jugi, $\frac{3}{4}$ –2 lin. longi, $\frac{1}{3}$ lin. lati, lineares, breviter aristato-apiculati. *Scapus* 5–10 poll. longus, monocephalus, laxè foliis

reductis multibracteatus. *Capitulum* 10–13 lin. diam. *Involucrum* late campanulatum; bracteae 4–5-seriatæ, glabræ, sparsim glanduloso-punctatæ, exteriores lineares, acuminatæ, intermediae oblongæ, obtusæ, brunneo-marginatæ, interiores maximæ, oblongæ, obtusæ, apice membranaceæ, brunneæ. *Receptaculum* convexum, paleaceum; paleæ submembranaceæ, apice acute trifidæ. *Corolla* radii 4–5½ lin. longa, 1 lin. lata, ligulata, minute 2–3-denticulata, supra lutea, subtus cupreo-brunnea, extra glandulosa; disci tubulosa, 5-dentata, lutea, glandulosa. *Pappi* squamæ late ovato-oblongæ, obtusissimæ.

NATAL. On damp rocks at Ulundi, alt. 5000–6000 ft., Evans, 404.

720. *Berkheya bilabiata*, N. E. Brown [Compositæ-Arctotidæ]; affinis *B. montanæ*, Wood et Evans, differt foliis late elliptico-oblongis nec basi attenuatis.

Caulis 3–4 ped. altus, simplex, puberulus, setosus, usque ad apicem foliosus. *Folia* alterna, suprema sessilia, cetera petiolata; petioli ¼–1½ poll. longi, spinuloso-marginati; laminæ 2–7 poll. longæ, 1–4½ poll. latæ, ellipticæ vel elliptico-ovatae, foliorum supremorum oblongæ, obtusæ, late sinuato-crenatæ, breviter spinuloso-ciliatæ, supra virides, scaberulæ, subtus canotomentosæ. *Capitula* pauca, corymbosa, radiata, multiflora, 1¼ poll. diam. *Involucri* bracteæ patentes, 4–7 lin. longæ, ½–¾ lin. latæ, lineares, acutæ, spinoso-mucronatæ et ciliatæ, utrinque minute scaberulæ, virides. *Receptaculum* alveolatum; alveoli setoso-ciliati. *Flores* radii neutri; corolla 6 lin. longa, bilabiata, extra pubescens, lutea; labia subæquilonga; labium exterius ligulatum, tridentatum; labium interius lineare; corolla disci 3 lin. longa, tubulosa, superne parum ampliata, usque ad medium 5-loba, extra pubescens; lobi lineares, acuti. *Ovarium* glabrum. *Pappi* squamæ ⅓ lin. longæ, oblongæ vel subquadratae, truncatae, denticulatæ.

NATAL. In a valley, Van Reenens Pass, alt. 5000–6000 ft., flowering in March, Wood, 5605.

721. *Berkheya nivea*, N. E. Brown [Compositæ-Arctotidæ]; affinis *B. seminivea*, Harv., differt foliis majoribus, marginibus breviter setuloso-ciliatis nec longe spinulosis.

Caulis 1½–3 ped. altus, simplex vel parce ramosus, foliosus, in pedunculum monocephalum 2–3-bracteatum abeuns, dense arachnoideo-albo-lanatus. *Folia* ascendentia, 2–3¾ poll. longa, ½–1¼ poll. lata, oblongo-lanceolata vel elliptico-lanceolata, integra, acuta, aristata, basi cuneato-acuta, marginibus revolutis breviter setuloso-ciliata, supra viridia, primum albo-araneosa, demum glabra, subtus dense albo-lanata, inferiora petiolata, superiora subsessilia; petioli 1½–5 lin. longi, utrinque longe setiferi. *Capitulum* solitarium, 3 poll. diam., radiatum, multiflorum, luteum. *Involucri* bracteæ 9–12 lin. longæ, ¾–1 lin. latæ, lineares, aristatæ, longe setoso-ciliatæ, dorso dense albo-lanatae; setæ subscabræ. *Corolla* radii 1¼ poll. longa, ligulata, apice tridentata; corolla

disci 3 lin, longa, tubulosa, usque ad medium 5-dentata, glabra ; dentes lineares, acutæ. *Pappi* squamæ 3-4-seriatæ, cuneato-oblongæ, obtusæ, denticulatæ. *Ovarium* appresse pubescens.

TRANSVAAL. Cerro de Pasco Mine, near Barberton, alt. 2200 ft., *Galpin*, 1356.

722. *Berkheya spinulosa*, *N. E. Brown* [Compositæ-Arctotideæ] ; capitulis iis *B. Adlami*, Hook. f., similibus, sed planta humilior, foliis minoribus et magis confertis.

Herba bipedalis. *Caulis* simplex, alatus, usque ad apicem foliosus, minute glanduloso-pubescens. *Folia* approximata, inferiora 2-3½ poll. longa, ¾ poll. lata, superiora gradatim minora, anguste oblonga, acuta, sinuato-lobata, basi in alas longe decurrentia, marginibus longe spinuloso-ciliatis, supra viridia, minutissime glandulosa, subtus dense albo-tomentosa. *Capitula* 3-4, corymbosa, pedunculata, 1½-1¾ poll. diam. *Involucri* bracteæ 4-5-seriatæ, basi concretæ, 3-5 lin. longæ, ⅔ lin. latæ, e basi attenuatæ, spinoso-acuminatæ et ciliatæ, minute glanduloso-pubescentes. *Flores* radii 7 lin. longi, 1½ lin. lati, ligulati, apice tridentati, lutei ; flores disci 3¼ lin. longi, tubulosi, ad medium 5-dentati, lutei. *Ovarium* glabrum. *Pappi* squamæ obtusæ, denticulatæ.

CAPE COLONY. Queenstown Division : plains near Queenstown, alt. 3500 ft., *Galpin*, 1694.

723. *Anagallis Hanningtonii*, *Baker* [Primulacæ] ; ad *A. parvifloram*, Hoffm. et Link, accedit ; recedit sepalis ovato-acuminatis, corolla calyce sesquilingiore, tubo brevissimo, lobis ovatis.

Herba annua, erecta, glabra. *Caules* graciles, tetragoni, superne ramosi. *Folia* sessilia, opposita, parva, ovata, mucronata, basi late rotundata. *Flores* ad axillas foliorum solitarii, pedicellis ascendentibus floribus multo longioribus. *Sepala* ovata, acuminata, 1½ lin. longa. *Corolla* pallida, tubo brevissimo, lobis ovatis. *Stamina* calyci æquilonga. *Capsula* globosa, parva, ad medium circumscisse dehiscens.

CENTRAL AFRICA. German East Africa, *Hannington*. British Central Africa ; Fwambo, near Lake Tanganyika, alt. 5000-6000 ft., *Carson*.

In habit it closely resembles *Lysimachia adoensis*, Hochst., but that species has a capsule which splits into valves.

724. *Sebæa humilis*, *N. E. Brown* [Gentianacæ] ; proxima *S. sulphureæ*, Cham. et Schlecht., differt floribus minoribus et stigmatibus duplo brevioribus.

Herba annua, pusilla, 1½-2½ poll. alta, glabra. *Caulis* simplex, gracilis. *Folia* pauca, inferiora rosulata, subsessilia, 1½-3½ lin. longa, 1¼-3 lin. lata, ovata vel orbiculato-ovata, subobtusata, basi late rotundata, vix subcordata. *Cymæ* 2-10-floræ. *Pedicelli* 1-3 lin. longi. *Sepala* 5, anguste navicularia, acutissima, alato-carinata, 2½-3 lin. longa, 1 lin. lata ; carina ½ lin. lata. *Corolla* 5-loba, lutea ; tubus 2½ lin. longus ; lobi 2½ lin. longi, 1½-1½ lin.

lati, elliptico-oblongi, obtusi. *Stamina* 5, fauci inserta; filamenta brevissima; antheræ exsertæ, fere 1 lin. longæ, lineares, eglandulosæ. *Stylus* longe exsertus, $2\frac{3}{4}$ lin. longus, prope basin biglandulosus; stigma magnum, percrassum, conoideo-clavatum, integrum.

CAPE COLONY. Queenstown Division: mountain-sides near Queenstown, alt. 4000 ft., *Galpin*, 1549.

725. *Sebæa laxa*, *N. E. Brown* [Gentianaceæ]; species distinctissima, ramosa, foliis lanceolatis acutis, cymis laxis.

Herba annua, 4–10 poll. alta, ramosa, glabra. *Rami* gracillimi, erecti. *Folia* 1–4 lin. longa, $\frac{1}{2}$ – $1\frac{3}{4}$ lin. lata, patentia, lanceolata vel ovata, acuta vel acuminata, basi angustata, subpetiolata. *Cymæ* laxæ, 3–15-floræ. *Sepala* $1\frac{1}{2}$ lin. longa, vix $\frac{1}{2}$ lin. lata, lanceolata, acuta, carinata. *Corolla* hypocrateriformis, quadrifida; tubus $1\frac{1}{2}$ – $1\frac{3}{4}$ lin. longus; lobi 2– $2\frac{1}{2}$ lin. longi, 1 lin. lati, ovato-lanceolati, acuti vel subacuti. *Stamina* longe exserta; filamenta $\frac{3}{4}$ lin. longa; antheræ $\frac{1}{2}$ lin. longæ, lineares, apice uniglandulosæ. *Stylus* $1\frac{1}{4}$ lin. longus, leviter clavatus, glaber.

CAPE COLONY. Riversdale Division: on the Kampsche Berg, *Burchell*, 7089. Swellendam Division: Zuurbraak Mountain, alt. 3000 ft., *Galpin*, 4337.

726. *Phyllopodium alpinum*, *N. E. Brown* [Scrophularineæ-Manuleæ]; a speciebus reliquis facile distinguitur foliis arcte approximatis crassiusculis.

Herba pusilla. *Rami* $\frac{1}{2}$ –2 poll. longi, decumbentes vel prostrati, pubescentes, usque ad apices foliosi. *Folia* conferta, 2–3 lin. longa, $\frac{2}{3}$ –1 lin. lata, lanceolata, subobtusa, basi in petiolum attenuata, integra vel paucidentata, crassiuscula, glabra, basi ciliata. *Spicæ* subglobosæ, 4–6 lin. diam. *Bracteæ* 2 lin. longæ, $\frac{2}{3}$ lin. latæ, lanceolato-oblongæ, obtusæ. *Calyx* $1\frac{3}{4}$ lin. longus, profunde 5-lobus; lobi lineares, obtusi, villosi. *Corollæ* tubus $1\frac{3}{4}$ –2 lin. longus; limbus $2\frac{1}{2}$ –3 lin. diam., 5-lobus, disco villosus; lobi 1– $1\frac{1}{4}$ lin. longi, oblongi, obtuse rotundati, pallide carnei, 2 superiores in disco auriantiaci. *Ovarii* loculi 4–5-ovulati.

CAPE COLONY. Caledon Division: on the summit of Genadendal Mountain, alt. 5000 ft., *Galpin*, 4407.

727. *Chænostoma subnudum*, *N. E. Brown* [Scrophulariaceæ-Manuleæ]; *C. denudato*, Benth., affinis, floribus et capsulis minoribus differt.

Herba (?) 1– $1\frac{1}{2}$ ped. alta, erecta, ramosa. *Rami* tenues, glabri, subviscidi. *Folia* opposita, distantia, linearia, inferiora 3–7 lin. longa, superiora 1– $2\frac{1}{2}$ lin. longa. *Panicula* laxa. *Pedicelli* 6–8 poll. longi, ascendentes, papilloso-scabridi. *Calyx* $1\frac{1}{2}$ lin. longus, profunde 5-fidus; lobi lineares, scabrido-pubescentes. *Corolla* lutea vel aurantiaca, extra pubescens; tubus $1\frac{1}{2}$ lin. longus; lobi $1\frac{1}{2}$ – $1\frac{3}{4}$ lin. longi, $1\frac{1}{2}$ lin. lati, elliptici vel suborbiculati, obtuse rotundati.

CAPE COLONY. Riversdale Division: Muis Kraal, near Garcias Pass, alt. 1500 ft., *Galpin*, 4375.

728. *Hyobanche Barklyi*, *N. E. Brown* [Scrophulariaceæ-Gerardiæ]; affinis *H. sanguinea*, Linn., sed floribus subcorymbosis multo longioribus gracilioribus differt.

Herba carnosa, parasitica. *Folia* non vidi. *Flores* subcorymbosi. *Bracteæ* 6–8 lin. longæ, 2 lin. latæ, angustæ oblongæ, obtusæ, concavæ, carnosæ, parce villosæ. *Bracteolæ* 8–9 lin. longæ, $\frac{1}{2}$ lin. latæ, lineares, apice levissime dilatatæ, obtusæ, parce villosæ. *Calyx* 12–14 lin. longus, 5-lobus, parce villosus, albidus (?); lobi lineares, subobtusiusculi, $\frac{3}{4}$ –1 lin. lati, posticus liber, cæteri basi ad 3–4 lin. connati. *Corolla* $2\frac{1}{4}$ – $2\frac{1}{2}$ poll. longa, inferne $1\frac{1}{2}$ lin. diam., superne 3 lin. diam., tubulosa, curvata, apice subgaleata, obtusa, superne villosa, rubra; os obliquum, parvum, 4–5 lin. longum; tubus intra omnino glaber. *Stamina* corollæ subæqualia, glabra. *Ovarium* ovoideum, glabrum; stylus staminibus æquilongus, apice curvatus, glaber; stigma crasso-clavatum, compressum.

CAPE COLONY. Little Namaqualand: parasitic on bulbs, in sand hills near Port Nolloth, *Barkly*.

729. *Hyobanche rubra*, *N. E. Brown* [Scrophulariaceæ-Gerardiæ]; affinis *H. sanguinea*, Linn.; dissimilis inflorescentia subcorymbosa nec elongata, et floribus multo longioribus ore obliquis nec galeatis.

Herba parasitica, carnosa. *Folia* squamiformia, sessilia, carnosa, transverse ovata vel latissime ovata, obtusa, carnosa, imbricata, concava, glabra. *Flores* dense corymboso-spicati. *Bracteæ* $\frac{3}{4}$ –1 poll. longæ, 5–6 lin. latæ, oblongæ, obtusæ, glabræ, ciliatæ; bracteolæ 12–14 lin. longæ, $1\frac{1}{4}$ – $1\frac{1}{2}$ lin. latæ, lineares, obtusæ, ciliatæ et dorso linea villosa notatæ. *Calyx* $1\frac{1}{4}$ – $1\frac{1}{2}$ poll. longus, 5-lobus, parce villosus; lobus posticus liber, linearis, acutus, cæteri ad medium connati, lineari-falcati, acuti. *Corolla* $2\frac{1}{4}$ poll. longa, tubulosa, apice oblique aperta nec galeata, superne villosa, rubra; os valde obliquum, 7–8 lin. longum, villosum, basi dente brevissimo instructum, marginibus revolutis; tubus intra ad basin villosus. *Stamina* corollæ subæqualia, glabra. *Ovarium* ovoidæum, glabrum; stylus corollæ subæquilongus, apice curvatus, glaber; stigma a dorso compressum, magnum, leviter bilobum.

CAPE COLONY. Mossel Bay Division: Near Gauritz River Bridge, alt. 800 ft., *Galpin*, 4329.

730. *Rhamphicarpa montana*, *N. E. Brown* [Scrophulariaceæ-Gerardiæ]; proxima *R. humili*, Hochst., floribus multo majoribus differt.

Herba parva. *Caules* $2\frac{1}{2}$ –4 poll. longi, procumbentes, villosi. *Folia* 6–9 poll. longa, $\frac{3}{4}$ –4 lin. lata, lineari-lanceolata, acuta, integra vel dentata, hirta vel scabrida. *Pedicelli* 2–5 lin. longi. *Calyx* basi bibracteatus, 4–6 lin. longus, tubuloso-campanulatus, ad medium 5-lobatus, hirtus; lobi deltoideo-lanceolati, acuti.

Corollæ tubus $1-1\frac{1}{4}$ poll. longus, tenuis, cylindricus, leviter curvatus; lobi patentes, 6-9 lin. longi, 6-10 lin. lati, obovati, apice obtuse rotundati.

TROPICAL AND SOUTH AFRICA. Matabeleland, *Elliott*. Mountains of Basutoland, alt. 7000-8000 ft., *Right Hon. J. Bryce*.

731. *Tecoma Brycei*, *N. E. Brown* [Bignoniaceæ]; *T. ricasoli-anæ*, Tanfani, similis, differt corolla intra hirta.

Suffrutex $1\frac{1}{2}$ -2-pedalis. *Folia* opposita, 3-4 poll. longa, pinnata, 9-foliolata; foliola petiolulata, lanceolata, acuminata, 9-15 lin. longa, 3-4 lin. lata, glabra. *Panicula* terminalis, 3-4 poll. longa; rami breves, 3-flori. *Pedicelli* 6-7 poll. longi, medio bibracteolati. *Calyx* campanulatus, utrinque minute glandulosus; tubus 4-5 lin. longus et latus; lobi 3 lin. longi, $2-2\frac{1}{2}$ lin. lati, deltoideo-ovati, mucronulati. *Corolla* lilacina, extra glabra, intra villosa; tubus $1\frac{1}{4}$ poll. longus, basi contractus, anguste cylindricus, superne ampliatus, $\frac{3}{4}$ poll. diam., campanulatus; lobi $\frac{1}{2}$ poll. longi, late rotundati, ciliati.

RHODESIA. Mashonaland, in dry places, alt. 4500 ft., *Right Hon. J. Bryce*.

732. *Plectranthus albocæruleus*, *N. E. Brown* [Labiatae-Ocimoideæ]; similis *P. tomentosus*, Benth., sed villositate et calyce aequaliter dentato facile distinguitur.

Herba elata, ramosa. *Caulis* obtuse tetragonus, villosus. *Folia* petiolata; petiolus $1-2\frac{1}{2}$ poll. longus, villosus; lamina $2-4$ poll. longa, $1\frac{3}{4}$ -3 poll. lata, late ovata, obtusa, basi subtruncata vel breviter cordata (lobis brevibus sæpe arcte contiguus), crenatodentata, rugosa, supra longe villosa, subtus molliter pubescentia. *Verticillastri* sessiles, in spicam longe pedunculatam basi ramosam conferti. *Bractee* $\frac{1}{2}$ -1 lin. longæ, $\frac{1}{2}-\frac{2}{3}$ lin. latæ, ovatæ, acutæ. *Pedicelli* $\frac{1}{3}-\frac{1}{2}$ lin. longi. *Calyx* $1\frac{2}{3}$ lin. longus, campanulatus, usque ad medium aequaliter 5-dentatus, pubescens; dentes acuminati, primum patentes, demum erecti vel subconniventes. *Corolla* $5\frac{1}{2}$ -6 lin. longa, pubescens; labium superius erectum, subquadratum, breviter 4-lobum, album, violaceo-lineatum; labium inferius naviculare, late cæruleo-limbatur. *Stamina* 4, filamentis liberis.

BRITISH CENTRAL AFRICA. Nyasaland: Zomba, *Mahon*. Described from a living plant which was raised from seeds sent to Kew by Mr. J. Mahon in June, 1898, and flowered in January, 1899.

733. *Salvia Burchellii*, *N. E. Brown* [Labiatae-Monardeæ]; affinis *S. stenophyllæ*, Burch., sed foliis et indumento omnino distincta.

Herba humilis, ramosa, tomentosa. *Folia* subconferta, $\frac{1}{2}$ -1 poll. longa, petiolata, pinnatifida, bullato-rugosa et crispata; lobi utrinque 2-3, lineari-oblongi, sublobulati, $1-2\frac{1}{2}$ lin. longi, $\frac{1}{2}$ -1 lin. lati. *Verticillastri* pauciflori, remotiusculi. *Pedicelli* $\frac{1}{2}$ lin. longi, tomentosi. *Calyx* campanulatus, glandulosus, pilis curvatis

pubescens, vix tomentosus; tubus $1\frac{3}{4}$ –2 lin. longus; dentes 1– $1\frac{1}{4}$ lin. longi, deltoidei, acuti. *Corolla* 4 lin. longa, subto-mentosa; tubus vix exsertus; labium superius $1\frac{1}{2}$ lin. longum, breviter et obtuse bilobum; labium inferius 2 lin. longum, $1\frac{1}{2}$ lin. latum, 4-lobum; lobi oblongi obtusi.

CAPE COLONY. Richmond Division: Rhenoster Poort, *Burchell*, 2120.

734. *Stachys albiflora*, *N. E. Brown* [Labiatae-Stachydeae]; proxima *S. grandifolia*, *E. Mey.*, calycis infundibuliformis dentibus patentibus differt.

Caulis erectus, molliter villosus. *Folia* petiolata; petioli $\frac{3}{4}$ – $1\frac{3}{4}$ poll. longi, villosi; laminæ $2\frac{1}{2}$ – $3\frac{1}{2}$ poll. longæ, 2– $2\frac{1}{2}$ poll. latæ, cordatæ, acutæ, crenato-dentatæ, utrinque molliter pubescentes. *Verticillastri* 6-flori, remotiusculi. *Pedicelli* $\frac{1}{3}$ lin. longi. *Calyx* infundibuliformis, 5-dentatus, pubescens; tubus 2 lin. longus; dentes 1 lin. longi, patentes, deltoidei, spinoso-acuminati. *Corolla* 7– $7\frac{1}{2}$ lin. longa, alba; tubus e calyce exsertus; labium superius porrectum, subrectum, compresso-galeatum, apice truncatum, extra glanduloso-pubescens; labium inferius trilobum, extra minute pubescens, lobis lateralibus rotundato-oblongis, obtusis, crenulato-denticulatis, lobo antico transverse elliptico minute crenulato.

NATAL. On the Drakensberg Range, alt. 6000–7000 ft., *Evans*, 395.

735. *Stachys parilis*, *N. E. Brown* [Labiatae-Stachydeae]; proxima *S. sessilifolia*, *E. Mey.*, sed foliis petiolatis facile distinguitur.

Herba 10–15 poll. alta, erecta, molliter villosa-pubescens. *Folia* petiolata; petioli 2–6 lin. longi; laminæ 9–15 lin. longæ, 6–11 lin. latæ, deltoideo-ovatæ, obtusæ, basi aperte cordatæ, obtuse dentatæ, rugosæ(?). *Flores* axillares, solitarii, oppositi. *Pedicelli* 1– $1\frac{1}{2}$ lin. longi. *Calyx* 4 lin. longus, ad medium 5-dentatus, villosus; dentes 2 lin. longi, deltoideo-lanceolati, mucronato-pungentes. *Corolla* 8 lin. longa, puberula; labium superius 2 lin. longum; suberectum, suborbiculare, concavum; labium inferius $4\frac{1}{2}$ lin. longum, trilobum, lobis lateralibus brevibus oblique deltoideis obtusis, lobo antico transverse elliptico obtuso minutissime crenulato.

NATAL. Tiger Cave Valley, on the Drakensberg Range, *Evans*, 387.

736. *Protea curvata*, *N. E. Brown* [Proteaceae]; proxima *P. grandiflora*, *Thunb.*, sed foliis falcatis facile distinguitur.

Arbor 15 ped. alta vel ultra, ramis crassis cinereis, apice minute puberulis. *Folia* 4–7 poll. longa, $4\frac{1}{2}$ –7 lin. lata, falcata, obtusa, basi longe attenuata, glabra, glauca, uninervia, oblique venosa, coriacea, haud marginata. *Capitulum* $2\frac{3}{4}$ poll. longum, circa 2 poll. latum, sessile. *Involueri* squamæ 8–9-seriatæ, basi

tomentosæ, superne glabræ, primum albo-ciliolatæ; interiores quam calyces breviores, $1\frac{1}{2}$ – $1\frac{3}{4}$ poll. longæ, 3–6 lin. latæ, ligulatæ, obtusæ; exteriores gradatim minores, subacutæ. *Calyx* fulvo-tomentosus; tubus $1\frac{1}{2}$ poll. longus; lobi 10 lin. longi, 3 cohærentes in lobum breviter bifidum apicibus pungentibus, 1 liber, mucronatus. *Stylus* $2\frac{1}{4}$ poll. longus, glaber, stigmatibus subulato sulcato-striato, basi levissime sinuato stylo continuo.

TRANSVAAL. Hillsides near Barberton, alt. 2500–3000 ft., *Galpin*, 973.

737. *Protea subvestita*, *N. E. Brown* [Proteaceæ]; affinis *P. hirtæ*, Klotzsch, sed involucri squamis paucioribus exterioribus angustis acutis differt.

Frutex vel arbor nana, ramis junioribus tomentosis demum glabris. *Folia* conferta, sessilia, $1\frac{3}{4}$ – $3\frac{1}{2}$ poll. longa, $\frac{3}{4}$ –1 poll. lata, patentia, oblonga, obtusa vel subacuta, basi angustata, coriacea, primum dense lanata, demum glabrata, haud marginata. *Capitulum* 2 poll. longum, $1\frac{1}{2}$ – $1\frac{3}{4}$ poll. latum, sessile. *Involucri* squamæ 6–7-seriatæ; interiores $1\frac{1}{2}$ – $1\frac{3}{4}$ poll. longæ, 3–5 lin. latæ, cuneato-oblongæ, obtusæ, apice sericeo-tomentosæ; exteriores gradatim minores; extimæ e basi ovata lineari-lanceolatæ, sericeo-tomentosæ. *Calycis* tubus $1\frac{1}{2}$ poll. longus, dense fulvo-hirsutus; limbus 4 lin. longus, dorso subglaber, apice dense albo-barbatus. *Stylus* $1\frac{3}{4}$ poll. longus, tenuis, glaber; stigma $2\frac{1}{2}$ –3 lin. longum, subulatum, sulcato-striatum, basi leviter flexuosum.

CAPE COLONY. Pondoland (Faku's Territory), *Sutherland*.

738. *Arthrosolen fraternus*, *N. E. Brown* [Thymelæaceæ]; similis *A. gymnostachydi*, C. A. Mey., sed foliis omnino glabris et floribus duplo longioribus differt.

Suffrutex 6–10 poll. altus, multicaulis, ramosus. *Rami* erecti, graciles, appresse pubescentes. *Folia* opposita, subsessilia, 4–6 lin. longa, $\frac{2}{3}$ – $1\frac{1}{2}$ lin. lata, plana, erecta, anguste lanceolata, acuta, basi angustata, utrinque glabra. *Spica* 6–9 lin. longa, laxa, 6–10-flora, ebracteata. *Calyx* extra appresse pubescens, ad medium purpureo-zonatus; tubus $3\frac{1}{2}$ – $2\frac{3}{4}$ lin. longus, gracilis; lobi $1\frac{1}{2}$ lin. longi, $\frac{1}{2}$ lin. lati, oblongi, obtusi, lutescentes, apice purpurei. *Stamina* 8, biseriata, inclusa.

CAPE COLONY. Queenstown Division: mountains near Queenstown, 4000–5000 ft., *Galpin*, 1771.

Meisner describes the flowers of *A. gymnostachys*, C. A. Mey., as being 4 lin. long, but in Drège's specimens on which that species was founded, they are only $2\frac{1}{2}$ lin. long, with shorter, broader lobes than in the present species, and rather densely villous-pubescent.

739. *Lachnæa passerinoides*, *N. E. Brown* [Thymelæaceæ]; affinis *L. funiculi*, Schinz, sed humilior, atque foliis duplo brevioribus et capitulis 2-floris differt.

Suffrutex 4–5 poll. altus, qui *Passerinam* refert. *Rami* graciles albo-tomentosi. *Folia* opposita, arcte appressa, nodis longiora,

1 lin. longa, $\frac{1}{3}$ lin. lata, lanceolata, concava, dorso valde carinata, glabra, marginibus ciliata et apice barbata. *Capitula* perparva, 2-flora; involucrium 4-bracteatum; bracteae foliis similes, erectae, $1\frac{1}{2}$ lin. longae, concavae, apice dense barbato-ciliatae; bracteolae interiores minutae, lineares, dense villosae. *Calycis* tubus 1 lin. longus, intra extraque sericeus; lobi 1 lin. longi, extra sericei. *Glandulae* 8, cylindricae, vix $\frac{1}{4}$ lin. longae, ad fauces insertae. *Stamina* 8, biseriata, inaequilonga, exserta; filamenta longiora $\frac{1}{2}$ lin. longa.

CAPE COLONY. Riversdale Division: on the mountains of Garcias Pass, alt. 12,000 ft., *Galpin*, 4497.

740. *Euphorbia calabarica*, *Burkill* [Euphorbiaceae-Euphorbieae]; ex affinitate *E. Grantii*, Oliv., foliis obovatis, habitu erecto, caule simplice vel parce ramoso.

Herba perennis, 2-3 ped. alta. *Caulis* glaber, teres, basi lignosus, 3-4 lin. crassus. *Folia* sparsa, obovata, glabra, apice brevissime acuminata, acuta, basi attenuata, 4-5 poll. longa, $1\frac{1}{2}$ -2 poll. lata, nervis lateralibus utrinque 9-12 inconspicuis; petiolus $\frac{1}{2}$ poll. longus. *Inflorescentia* e cymis tribus effecta, capitulo centrali femineo, ceteris masculinis; rami cicatricibus latoribus in aetate notati, compressi; bracteae foliaceae, rotundatae, apice in setam tenuissimam 1 lin. longam productae. *Involucrum* $1\frac{1}{2}$ lin. altum; lobi rotundati, pectinati, minute hirsuti; glandulae capituli centralis 5, aliorum 4, transverse ovatae, margine exteriori lobatae, e facie inferiori antenniferae, antennis 2-4 semel vel bis bifurcatis apicibus capitatis; bracteae inter flores laciniatae, minute hirsutae. *Antherae* subglobosae. *Ovarium* glabrum; styli rami tres, apice tantum bifurcati. *Capsula* glabra, globosa, 3 lin. diam. *Semina* pallida, glabra, laevia.

WEST AFRICA. Old Calabar, flowering in February, *G. Mann*, 2315. Also in cultivation at Kew from the same locality.

741. *Synadenium Cameronii*, *N. E. Brown* [Euphorbiaceae-Euphorbieae]; affinis *S. arborescenti*, Boiss., floribus simpliciter umbellatis distinguitur.

Caules 7-8 ped. alti, carnosii, teretes, glabri. *Folia* breviter petiolata, 3 poll. vel ultra longa, circa $1\frac{1}{2}$ poll. lata, obovata, acuta, basi longe cuneata, utrinque glabra, decidua. *Umbellae* axillares, simplices, 4-5-florae, erectae. *Pedunculi* $\frac{1}{3}$ - $\frac{3}{4}$ poll. longi, carnosii, dorso subpuberuli. *Bractae* 1 lin. longae, ovatae, pubescentes. *Pedicelli* 3-4 lin. longi, 1 lin. crassi, subclavati, carnosii, patule pubescentes. *Bracteolae* $1\frac{1}{2}$ - $1\frac{2}{3}$ lin. longae et latae, subquadratae, minute glanduloso-denticulatae, pubescentes, involucro paulo breviores. *Involucrum* exterius carnosum, late infundibuliforme, integrum, margine truncatum, extra ad basin pubescens, superne glabrum; interius in squamas membranaceas 5 quadratas apice fimbriatas utrinque pubescentes divisum. *Stamina* 30, 5-fasciculata; fasciculi 2-4-bracteolati; bracteolae lineari-spathulatae, superne hirtae, liberae vel connatae. *Involucellum* floris feminei membranaceum, tubulosum, 5-angulare, breviter 5-lobum,

fimbriatum, utrinque villosopubescens, angulis plumoso-fimbriatis. *Ovarium* appresse pubescens; styli ad medium bifidi, ramis filiformibus.

BRITISH CENTRAL AFRICA. Nyasaland: Namasi, *Cameron*.

742. *Bobartia gracilis*, *Baker* [Iridaceæ]; ad *B. aphyllam*, Ker-Gawl., accedit; differt caulibus gracilioribus brevioribus, spathis minoribus.

Caulis gracilis, teres, pedalis vel sesquipedalis, pallide virens, sulcatus, basi vaginatus. *Folia* propria nulla. *Spathæ* 1-6, paucifloræ, in glomerulum terminalem folio reducto rigido parvo lanceolato suffultum dispositæ; spatharum valvæ duræ, pallide virides, exterior 5-6, interior 12-13 lin. longa. *Pedicelli* spathæ æquilongi. *Perianthium* aurantiacum, segmentis oblanceolatis obtusis conformibus ascendentibus 6-7 lin. longis. *Stamina* perianthio triplo breviora, antheris post anthesin convolutis. *Ovarium* turbinatum, glabrum; stylus brevis, ramis 3 subulatis erecto-patentibus 3 lin. longis.

CAPE COLONY. Plains near Cove Rock, East London, alt. 50 ft., *Galpin*, 3254.

743. *Asparagus longipes*, *Baker* [Liliaceæ-Asparageæ]; habitus *A. asiatici*, Linn., et *A. africana*, Lam.; recedit foliis haud pungentibus, floribus semper geminis ad basin ramulorum solum productis.

Suffrutex sarmentosus, ramis copiose pinnatim ramulosis. *Folia* basi haud pungentia. *Cladodia* 9-12-na, subteretia, gracilia, viridia, 6-12 lin. longa. *Flores* hermaphroditi, semper gemini, ad basin ramulorum solum producti, pedicellis arcuatis 5-6 lin. longis. *Perianthium* 2½ lin. longum, segmentis ligulatis albis viridi-brunneo-vittatis infra medium diu conniventibus. *Stamina* perianthio distincte breviora, antheris oblongis parvis luteis.

CAMEROON MOUNTAINS. Imported and presented to the Royal Gardens by Messrs. Sander, of St. Albans. It flowered at Kew in November, 1898.

744. *Kniphofia longiflora*, *Baker* [Liliaceæ-Hemerocallideæ]; ad *K. sarmentosam*, Kunth, accedit; differt perianthio duplo longiore, staminibus haud exsertis.

Folia linearia, bipedalia, flaccida, viridia, acute carinata, basin versus 9-10 lin. lata, ad apicem sensim attenuata, marginibus lævibus. *Pedunculus* validus, tripedalis et ultra, prope medium bracteis 2 longis linearibus præditus. *Racemus* densus, oblongus, 3 poll. longus, floribus omnibus arcte deflexis, pedicellis brevissimis, bracteis oblongis scariosis 1½-2 lin. longis. *Perianthium* cylindricum, gracile, luteo-rubrum, curvatum, 18 lin. longum, lobis ligulatis obtusis 2 lin. longis. *Stamina* biseriata, inclusa. *Stylus* longe exsertus.

NATAL, probably. Raised from seeds, communicated in October, 1897, by Mrs. Watkins, Euston Square, London, and flowered at Kew under glass in November, 1898.

745. *Aloe lugardiana*, *Baker* [Liliaceæ-Aloineæ]; ad *A. commutata*, Todaro, magis accedit; differt perianthii segmentis tubo æquilongis.

Planta acaulis. *Folia* dense rosulata, crassa, ovato-lanceolata, subpedalia, inferne 2-3 poll. lata, rubro-brunnea, haud lineata, maculis oblongis albidis copiosis decorata, aculeis marginalibus deltoideo-cuspidatis corneis magnitudine mediocribus. *Racemus* laxus, cylindricus, centralis, subpedalis; pedicelli ascendentes, 5-6 lin. longi; bracteæ ovato-cuspidatæ, parvæ. *Perianthium* cylindricum, supra ovarium constrictum, 12-15 lin. longum; segmenta tubo æquilonga. *Stamina* inclusa. *Stylus* demum exsertus.

RHODESIA. Bechuanaland; Sibetuané's drift, Botletle river, alt. 3000 ft., *Mrs. E. J. Lugard*.

746. *Aloe* (*Eualoe*) *Galpini*, *Baker* [Liliaceæ-Aloineæ]; ad *A. platylepidem*, *Baker*, accedit; differt foliis latoribus, genitalibus longe exsertis.

Planta arborescens, caule 8-pedali. *Folia* lanceolata, crassa, deorsum 5-6 poll. lata, ad apicem sensim attenuata, dentibus marginalibus crebris deltoideis corneis magnitudine mediocribus. *Pedunculus* validus (6-8 lin. diam.), basi ramosus. *Racemus* densissimus, cylindricus, pedalis, pedicellis brevissimis, bracteis parvis ovatis. *Perianthium* cylindricum, splendide rubrum, 12-14 lin. longum, pæne ad basin fissum. *Genitalia* longe exserta.

CAPE COLONY. Mountain sides, Queenstown, alt. 3500-4000 ft., *Galpin*, 2335.

747. *Aloe* (*Eualoe*) *Lastii*, *Baker* [Liliaceæ-Aloineæ]; ad *A. brachstachyam*, *Baker*, accedit; differt foliis brevioribus latoribus deorsum facie distincte lineatis, perianthio pallide luteo, tubo brevissimo.

Caudex simplex, gracilis, sesquipedalis. *Folia* dense rosulata, lanceolata, 12-15 poll. longa, supra basin 3 poll. lata, ad apicem sensim attenuata, immaculata, inferne facie lineata, aculeis marginalibus parvis crebris deltoideis patulis. *Pedunculus* simplex, 1½-2-pedalis, bracteis vacuis pluribus parvis præditus. *Racemus* densus, capitatus, pedicellis erectis 6-12 lin. longis, bracteis parvis obtusis pallidis viridi-lineatis. *Perianthium* rectum, cylindricum 15 lin. longum, pallide luteum, apice viridulum, tubo brevissimo, segmentis conniventibus, apice patulis. *Stamina* perianthio æquilonga. *Stylus* demum longe exsertus.

ZANZIBAR. Sent home alive in 1885, by J. T. Last, Esq., and flowered at Kew in December, 1898.

748. *Aloe somaliensis*, *C. H. Wright* [Liliaceæ-Aloineæ]; ex affinitate *A. zebrina*, *Baker*.

Planta breviter caulescens. *Folia* rosulata, prope apices decurvata, $5\frac{1}{2}$ poll. longa, $2\frac{1}{4}$ poll. lata, 4 lin. crassa, rigida, utrinque vernicosa, maculis oblongis luteo-viridibus ornata; dentes rubri, leviter recurvi, $1-1\frac{1}{2}$ lin. longi, inter se 3 lin. distantes. *Panicula* leviter ramosa, $1\frac{1}{2}$ ped. longa; pedunculus compressus; bracteæ membranaceæ, triangulares, acuminatæ, pedicellos paullo superantes. *Perianthii* segmenta, oblonga, obtusa, 8 lin. longa, 3 lin. lata, basi rubra, apice semihyalina, viridi-carinata. *Stamina* exteriora perianthii segmentis æquilonga, interiora paullo breviora; filamenta compressa. *Ovarium* ovoideum.

SOMALILAND. *Miss Edith Cole*, 261. Described from a plant grown at Kew.

749. *Tulbaghia campanulata*, *N. E. Brown* [Liliaceæ-Alliæ]; affinis *T. ludwigianæ*, Harv., foliis linearibus facile distinguitur.

Folia linearia, $1\frac{1}{2}-2$ lin. lata, obtusa, glabra. *Scapus* $10\frac{1}{2}$ poll. longus, 1 lin. crassus, glaber. *Bracteæ* 2, ovato-lanceolatæ, acuminatæ, $\frac{1}{2}$ poll. longæ. *Umbella* circa 6-flora. *Pedicelli* $\frac{1}{2}-1\frac{1}{4}$ poll. longi, glabri. *Perianthii* tubus $2\frac{1}{2}$ lin. longus, 2 lin. diam., campanulatus; lobi $2\frac{1}{2}$ lin. longi, $1\frac{3}{4}$ lin. lati, oblongi, acuti. *Corona* magna, $1\frac{1}{2}$ lin. longa, carnosæ, crenulata, vel brevissime trilobata, aurantiaca.

CAPE COLONY. Queenstown Division: mountains near Queenstown, alt. 3500-4000 ft., *Galpin*, 1660.

750. *Dipcadi brevipes*, *Baker* [Liliaceæ-Scilleæ]; ad *D. magnum*, Baker, magis accedit; differt habitu minore, foliis brevioribus angustioribus, pedicellis brevibus floriferis cernuis, perianthii segmentis exterioribus haud caudatis.

Bulbus globosus, 12-15 lin. diam. *Folia* plura, ascendunt, linearia vel lanceolata, 9-10 poll. longa, inferne 6-9 lin. lata, modice firma, glabra, margine haud ciliata. *Pedunculus* flexuosus, foliis brevior. *Racemus* laxus, simplex, demum semipedalis; pedicelli brevissimi, floriferi cernui, fructiferi ascendentes; bracteæ lanceolatæ, parvæ. *Perianthium* viridulum, 9 lin. longum; segmenta interiora apice patula, exteriora lingulata, reflexa 2-3 lin. longa, interioribus paullo longiora. *Filamenta* antheris æquilonga. *Stylus* ovario brevior. *Capsula* oblonga, angulata, $4\frac{1}{2}$ lin. longa.

RHODESIA. Bechuanaland; Ngamiland; Kwebe hills, alt. 3300 ft., *Mrs. E. J. Lugard*.

751. *Ornithogalum tenuipes*, *C. H. Wright* [Liliaceæ-Scilleæ]; *O. setifolio*, Kunth, affine, foliis paucioribus pedicellisque elongatis bracteisque minutis differt.

Bulbus oblongus, sublævis, sursum attenuatus. *Folia* 5, filiformia, supra canaliculata, subtus convexa, scapo æquilonga vel paullo breviora. *Pedunculi* 4-5 poll. longi; bracteæ $1\frac{1}{2}$ lin. longæ, basi latæ, membranaceæ, sursum abrupte acuminatæ; racemi 3, $5\frac{1}{2}$ poll. longi; pedicelli 5-6 lin. longi, filiformes. *Perianthium*

6 lin. diam.; segmenta oblonga, acuta, 3 lin. longa, $1\frac{1}{4}$ lin. lata, alba, viridi-carinata; carinae segmentorum exteriorum quam interiorum latiores. *Stamina* segmentis perianthii dimidio breviora. *Ovarium* trigonum; stylus columnaris; stigma trilobum lobis decurrentibus, stamina paullo superans.

CAPE COLONY. Albany Div.: Grahamstown, *Schönland*, 246. Flowered at Kew in July, 1899.

752. *Gleichenia* (*Eugleichenia*) *elongata*, *Baker* [Filices-Gleicheniaceae]; ad *G. Boryi*, Kunze, magis accedit; differt rhachi primaria elongata, pinnis remotis.

Lamina elongato-deltoidea, sesquipedalia et ultra, quadripinnata, rigide coriacea, facie viridis, glabra, dorso glauca, ad costas dense ferrugineo-pilosa, rhachi primaria simplici nuda elongata; pinnæ 4-jugæ, lanceolatae, sessiles, remotæ, 6–9 poll. longæ, 15–18 lin. latæ; pinnulæ lineares, multijugæ; segmenta ultima rotunda, $\frac{1}{2}$ lin. longæ. *Sori* centrales, superficiales, globosi, sporangiis 6–8 stramineis.

BRITISH EAST AFRICA. Uganda; Ruwenzori, amongst heather, Butagu, alt. 8000–10000 ft., *Scott-Elliott*, 8011.

753. *Asplenium* (*Euasplenium*) *efulense*, *Baker* [Filices-Polypodiaceae]; ad *A. sinuatum*, P. Beauv., accedit; differt frondibus brevioribus oblongo-lanceolatis, rhizomate gracili repente, soris e costa pæne ad marginem productis.

Rhizoma gracile, repens, paleis lanceolatis nigrescentibus clathratis dense vestitum. *Stipites* breves, segregati, erecti, nudi. *Lamina* simplex, oblongo-lanceolata, 6–8 poll. longa, $1\frac{1}{2}$ –2 poll. lata, subintegra, acuminata, basi cuneata, modice firma, utrinque viridis, glabra; venæ remotæ, conspicuæ, ascendentes, sæpissime furcatae. *Sori* graciles, e costa pæne ad marginem frondis producti. *Indusium* firmum, angustum, persistens.

CAMEROONS. Efulen, *Bates*, 454.

754. *Asplenium* (*Euasplenium*) *ruwenzoriense*, *Baker* [Filices-Polypodiaceae]; ad *A. vulcanicum*, Blume, accedit; differt pinnis multijugis angustioribus, soris ad dimidium inferius venarum restrictis.

Lamina oblongo-lanceolata, 2–3 ped. longa, simpliciter pinnata, modice firma, utrinque viridis, glabra; rhachis nuda, sordide viridis; pinnæ lineares, sessiles, multijugæ, acuminatae, crenatae, 4–5 poll. longæ, deorsum 6–7 lin. latæ, basi subæqualiter cuneatae; inferiores haud reductæ; venæ ascendentes, furcatae. *Sori* lineari-oblongi, 2 lin. longi, a margine pinnarum remoti, ad dimidium inferius venarum restricti. *Indusium* latum, firmum, simplex, persistens.

BRITISH EAST AFRICA. Uganda; Ruwenzori, common in forests, Huata, alt. 6000–8000 ft., *Scott-Elliott*, 7706.

755. *Lygodium Brycei*, *Baker* [Filices-Schizæaceæ]; ad *L. Karstenii*, Kuhn, magis accedit; differt frondibus sterilibus subrigide coriaceis nitidulis rhachibus brunneis.

Lamina decomposita, ampla, pinnis primariis oblongo-deltoides subrigide coriaceis utrinque viridibus nitidulis parce pilosis 6–8 poll. longis; pinnulæ deltoideæ, petiolatæ, deorsum pinnatæ, sursum caudatæ pinnatifidæ, segmentis ascendentibus contiguis oblongis obtusis; rhachis gracilis, teres, inarticulata, castanea; venulæ liberæ, contiguæ, perspicuæ. *Segmenta fertilia* haud visa.

RHODESIA. Mashonaland; near the Portuguese boundary, drift of Renie river, alt. 2500 ft., *Right Hon. J. Bryce*.

II.—DECADES KEWENSES

PLANTARUM NOVARUM IN HERBARIO HORTI REGII
CONSERVATARUM.

DECADES XXXIV.—XXXV.

331. *Pterospermum Proteus*, *Burkill* [Sterculiaceæ]; a speciebus affinis, *P. saigonensi*, Pierre, et *P. insulari*, Pierre, floribus minoribus facile distinguitur.

Arbuseula 8-pedalis. *Rami* juniores pilis rufescentibus dense tecti. *Folia* subovata, polymorpha, nunc fere integra, nunc irregulariter inciso-lobata, hæc basi peltata, illa cordata, hæc apice ob loborum parvorum propinquitatem subito acuminata, illa ad apicem truncata vel cuspidata, pleraque inæquilaterialia, 2–4 poll. longa, 2–2½ poll. lata, juniora supra rufo-tomentosa dein glabra, infra pilis brevibus rufo-griseis dense tecta. *Flores* 1–4 ad axillas foliorum; bracteæ lineares, majores 1½ lin. longæ. *Sepala* extus dense rufo-tomentosa, intus pilis longiusculis nitidis ornata, linearia, 10 lin. longa, 1 lin. lata. *Petala* anguste linearia, 7–8 lin. longa, ¾ lin. lata, 7–8-nervia, margine utroque crispula. *Androphorum* ½ lin. longum. *Stamina* petalis paullo breviora, basi fere libera; staminodia dimidia parte superiore hirsuta. *Ovarium* 1½ lin. longum, dense rufo-tomentosum. *Fructus* maturus 5-angulatus, faciebus paullo sulcatus, dense rufo-tomentosus, 1½ poll. longus. *Semina* ala inclusa 1¼ poll. longa.

CHINA. Yunnan; Mengtze, in woods, alt. 5000 ft., *A. Henry*, 10120.

332. *Oxalis dispar*, *N. E. Brown* [Geraniaceæ]; affinis *O. Laureola*, Progel, petiolis longioribus et floribus confertis differt.

Suffrutex ramosus, ramis pubescentibus. *Folia* sparsa, pinnatim trifoliolata; petiolus 3–3¾ poll. longus, gracilis, teres, pubescens; foliola subæqualia, 2¼–3 poll. longa, 1–1¼ poll. lata, lanceolata, acuta, basi cuneata, lateralibus basi paullo obliqua utrinque molliter

pubescentia. *Pedunculi* $3\frac{1}{2}$ –4 poll. longi, graciles, minute pubescentes, apice bifidi; divisiones $1\frac{1}{2}$ –2 lin. longi, dense 7–10-flori. *Pedicelli* fere contigui, $1\frac{1}{2}$ demum $2\frac{1}{3}$ lin. longi, basi articulati, minute pubescentes. *Sepala* $3\frac{1}{2}$ lin. longa, 1 – $1\frac{1}{4}$ lin. lata, oblongo-lanceolata, subacuta, pubescentia, viridia, eglandulosa. *Petala* $\frac{1}{2}$ poll. longa, lutea. *Stamina* basi monadelphæ; filamenta edentata, longiora superne puberula. *Ovarium* ovoideum, 5-sulcatum, glabrum. *Capsula* apice breviter 5-cornuta, 15-carinata, carinis 5 primariis puberulis.

GUIANA. Described from a living plant introduced by Messrs. F. Sander & Co., of St. Albans, which flowered in August, 1899.

333. *Dioclea* (*Pachylobium*) *megacarpa*, Rolfe [Leguminosæ-Phaseoleæ]; ad *D. violaceam*, Mart., accedit, recedit legumine arcuato oblique corrugato velutino-villoso, sutura superiore vix incrassata.

Rami hirsuti. *Stipulæ* falcato-lanceolatæ, acutæ, hirsutæ, 6–7 lin. longæ. *Folia* trifoliata; foliola late elliptica, abrupte et brevissime acuminata, utrinque breviter pilosa, 4–5 poll. longa, circa 10-costata, lateralibus basi oblique subcordata; petioli pilosi, 4–5 poll. longi; stipellæ filiformes, $2\frac{1}{2}$ –3 lin. longæ. *Pedunculi* $\frac{3}{4}$ – $1\frac{1}{4}$ ped. longi, crassiusculi, subteretes, ferrugineo-velutini, multiflori. *Bracteas* non vidi. *Nodi* floriferi crassi. *Pedicelli* 3 lin. longi, ferrugineo-velutini. *Bracteolæ* reniformi-orbiculatæ, ferrugineo-velutinæ. *Calyx* late campanulatus, velutinus; tubus 4–5 lin. longus; lacinia superior tubo dimidio brevior, lata, brevissime biloba, basi gibbosa; laciniae laterales ei paullo longiores, ovatæ, subacutæ; lacinia infima angustior, tubo æquilonga, apice incurva, subobtusata. *Petala* calyx subduplo longiora; vexillum late orbiculatum, reflexum, callis conspicuis, ungue 2 lin. longa incurva; alæ unguiculatæ, oblique obovatæ, laminis basi breviter auriculatis; carina alis brevior, incurva, subobtusata. *Tubus stamineus* valde incurvus, medio clausus; antheræ 5 fertiles oblongæ, 5 alternæ parvæ et effectæ. *Ovarium* dense velutinum. *Legumen* 6– $6\frac{1}{2}$ poll. longum, $2\frac{1}{4}$ lin. latum, incurvum, crasse lignosum, oblique corrugatum et sparse reticulatum, velutino-villosum, sutura superiore vix incrassata. *Semina* 3 vel 4, nitida, hilo lineari semicincta.—*Mucuna*? sp., Micheli in *Mém. Soc. Phys. et Hist. Nat. Genève*, xxviii., p. 26.

TROPICAL AMERICA. Trinidad: Cangrehal, St. Annes, Hart, 6406. Brazil: Martius. Paraguay: Assomption, Gibert, 9; Balansa, 1858a (ex Micheli).

A remarkable species whose fruits have long been known, and supposed to belong to a *Mucuna*, but the receipt of complete material from Mr. Hart enables them to be referred to their proper systematic position.

334. *Sophora* (*Eusophora*) *Bakeri*, C. B. Clarke ex Baker [Leguminosæ-Sophoreæ]; ad *S. heptaphyllum*, Linn., accedit; recedit foliolis 13–15 obtusis, floribus majoribus, pedicellis calyce floriferis brevioribus.

Frutex, ramulis dense pubescentibus. *Folia* petiolata, imparipinnata, 4-8 poll. longa; foliola oblonga, obtusa, minute mucronata, 1-2 poll. longa, sessilia, utrinque dense pubescentia. *Racemi* laxi, terminales, pedicellis brevibus dense pubescentibus, bracteis subulatis deciduis. *Calyx* dense pubescens, 3 lin. longus, tubo campanulato, dentibus parvis ovatis. *Corolla* glabra, rubro-lutea, calyce sesquolongiora. *Fructus* longe stipitatus, pubescens, demum dehiscens, teres, seminibus 2-3 oblongis, rostro magno persistente.

INDIA. Behar : Parasnath, alt. 3500-4200 ft., *C. B. Clarke*.

This is the imperfectly-known species, mentioned at the end of the genus in Hooker's *Flora of British India*, ii., p. 251.

335. *Begonia peristegia*, *Stapf* [Begoniaceæ]; affinis *B. rutilanti*, speciei tantum e descriptione mihi notæ, sed differt foliis magis oblongis haud dentatis nec coriaceis, et bracteis floribusque minoribus.

Caulis ut omnes partes glaber, crassus. *Folia* oblonga, breviter acuminata, basi cordata, uno latere in lobum magnum rotundatum ampliata, crenulata, 6-7 poll. longa, ad 4 poll. lata, carnosula, supra amœne viridia, infra pallida, circiter 10-nervia; petiolus rubescens, ad 6 poll. longus, apice annulo pilorum brevium alborum cinctus; stipulæ late ovatæ, acutæ, carinatæ, virides, ad 1½ poll. longæ. *Inflorescentiæ* iteratim dichotomæ, pedunculo ad 6 poll. longo ut rami ramulique plus minus sanguineo; bracteæ oblongæ, acutæ, 3-4 lin. longæ, caducæ. *Flos masculinus* pedicello tandem ad 3 lin. longo suffultus, in alabastro bracteolis late ovatis acutis carinatis rubescentibus arcte amplexus; sepala elliptico-rotunda, 6 lin. longa, alba vel roseo-suffusa; petala oblonga, alba, 3-4 lin. longa; stamina toro convexo parvo inserta, antheris linearibus 1 lin. longis, connectivo obtuso, filamentis brevibus. *Flos femineus* inter bracteas latissime ovatas 3-3½ lin. longas obtusas cuspidulatas rubescentes ovarium subæquantes et arcte amplectentes dorso rotundatas sessilis; lobi albi, ad 5 lin. longi, exteriores late elliptici, acuti; ovarium 3-merum, 3-alatum, alis duabus brevioribus rectangularibus acutis; styli crassi, subconnati; stigmata bicruria, indumento breviter papilloso aureo sinum inter crura et spirarum circiter 3 arctarum margines vestiente; placentæ sectione transversa sub-reniformi-cordatæ.

BRAZIL. Described from a living specimen communicated by Messrs. F. Sander & Co., who grew it in their establishment at St. Albans.

336. *Acomis Lesteri*, *Burkill* [Compositæ-Inuloideæ]; *A. macræ*, F. Muell., valde affinis, sed ramis aliquo modo tomentosis diversa.

Herba spithamea, e radice ramosissima, ramis gracilibus rigidiusculis aliquo modo tomentosis. *Folia* inconspicua, lineari-subulata, apice acuta, 2-3 lin. longa. *Capitula* longe pedunculata, iis *A. macræ* omnino similia æqualia, 3 lin. diam.; bracteæ involucri basi excepta scariosæ, lanceolato-ovatæ, apice subacuminatæ,

1 lin. longæ. *Corollæ* tubus basi dilatatus, extus pilis glandulosis ornatus, $\frac{1}{2}$ lin. longus; lobi ovati, acuti. *Antheræ* apice conspicue mucronatæ, basi tenuissime caudatæ. *Ovarium* extus minute verrucosum. *Pappus* nullus.

AUSTRALIA. North-west Queensland, *Lester*.

337. *Hoya subcalva*, *Burkill* [Asclepiadaceæ]; ex affinitate *H. purpurea*, Blume, et *H. Guppyi*, Oliv., ab una coronæ radiis elongatis, ab altera petalis subcalvis, ab utraque foliis tenuioribus differt.

Folia ovato-elliptica, brevissime acuminata, basi rotundata, 4–4½ poll. longa, 2–2½ poll. lata, glabra, nervis utrinque sat conspicuis; petiolus 6–10 lin. longus. *Inflorescentiæ* umbellatæ, 8–10-floræ; pedunculus et pedicelli ad 1½ poll. longi, glabri. *Sepala* subtriangularia, $\frac{1}{2}$ lin. longa. *Corolla* ad medium divisa, 10–14 lin. lata, dorsa glabra, intus præcipue ad margines minutissime pustulata nec pilosa; segmenta anguste triangularia, acuta. *Coronæ* radii 2½–3 lin. longi, medio vix 1 lin. lati, nitentes.

NEW GUINEA. Kaiser-Wilhelms Land *Holtrung*, 28. SOLOMON ISLANDS. In a collection chiefly from New Georgia, *Officers of H.M.S. "Penguin."*

The specimen collected in New Guinea was sent to Kew under the name of *H. purpurea*, Blume.

338. *Ceropegia perforata*, *N. E. Brown* [Asclepiadaceæ]; *C. cumingiana*, Decne. affinis, differt foliis minoribus, corolla maculata, coronæ exterioris lobis perforatis.

Herba volubilis, glabra. *Folia* petiolata, 2¼–2½ poll. longa, 1¼–1½ poll. lata, ovata vel ovato-oblonga, acuminata, basi breviter cordata, costa subtus marginibusque pilis paucis minutis instructis. *Cymæ* multifloræ, pedunculatæ. *Pedunculus* 1½ poll. longus. *Bractææ* minutæ, $\frac{1}{2}$ –1 lin. longæ, subulatæ. *Pedicelli* 7–8 lin. longi. *Sepala* 1 lin. longa, subulata. *Corollæ* tubus 13 lin. longus, supra basin globoso-inflatus abrupte curvatus, superne infundibuliformis, ore $\frac{1}{2}$ poll. diam., extra albidus purpureo-maculatus, glaber, intra basi hirtus; lobi erecti, usque ad apicem coherentes, 4½–5 lin. longi, ovato-oblongi, obtusi, valde replicati, glabri, pallide lutei, extra basi purpureo-maculati. *Corona exterior* basi cupularis, 5-loba; lobi ovati vel deltoideo-ovati, sub apicem perforati, ciliati, lutei, marginibus et ad medium maculis duabus brunneo-purpureis. *Coronæ interioris* lobi 1½ lin. longi, conniventes, erecti, lineares, lutei, glabri.

NEW GUINEA. Described from a living plant introduced by Messrs. F. Sander & Co., of St. Albans.

339. *Echidnopsis Bentii*, *N. E. Brown* [Asclepiadaceæ]; proxima *E. dammanniana*, Sprenger, sed corona omnino differt.

Caules 7–8-angulati, iis *E. dammanniana* similes, glabri. *Flores* bini. *Pedicelli* $\frac{1}{2}$ – $\frac{2}{3}$ lin. longi, glabri. *Sepala* $\frac{3}{4}$ lin. longa, deltoideo-ovata, acuta, glabra. *Corolla* 5 lin. diam., extra viridis

purpureo-maculata, intra intense velutino-purpurea; tubus 1 lin. longus, campanulatus; limbus patens, ad medium 5-lobus; lobi $1\frac{1}{2}$ lin. longi et lati, deltoideo-ovati, acuti, velutino-puberuli, marginibus revolutis. *Corona exterior* cupularis, pentagona, truncata, angulis acutis parum productis, purpurea. *Coronæ interioris* lobi fere $\frac{1}{2}$ lin. longi, erecto-conniventi, leviter clavati, obtusi, basi fundo coronæ exterioris adnati.

ARABIA. Described from a living plant sent by the late Mr. Theodore Bent, in 1897, to the Royal Gardens, Kew, where it flowered in August, 1898.

340. *Caralluma torta*, N. E. Brown [Asclepiadaceæ]; ab omnibus speciebus lobis corollæ in columnam tortis valde distincta.

Caulis obtuse tetragonus, 4-5 lin. crassus, rugulosus, minutissime pubescens; anguli leviter dentati. *Folia* $1\frac{1}{2}$ lin. longa, lanceolato-subulata, pubescentia. *Flores* solitarii, breviter pedicellati, extra pubescentes. *Sepala* $\frac{3}{4}$ -1 lin. longa, reflexa. *Corolla* 8-8 $\frac{1}{2}$ lin. longa; lobi lineares, basi in globum 5-fenestratum arcuati, superne tortuosi in columnam longam tenuem apice globoso-clavatam cohærentes, intra glabri, virides, basi brunneo-purpureo maculati. *Corona* brunneo-purpurea, apicibus lorum pallidis; lobi exteriores fere $\frac{1}{2}$ lin. longi, erecti, profunde bifidi; lobi interiores antheris incumbentes et iis longiores, plani, oblongi, obtusi, dorso in calcar plus minus producti.

SOUTH ARABIA or SOCOTRA. Described from a living plant sent to Kew by the late Mr. Theodore Bent, in 1897, without a precise statement as to its locality.

341. *Bœa hians*, Burkill [Gesneraceæ]; a *B. Lawesii*, H. O. Forbes, caulibus foliisque pilis fulvis densissime tectis inter alia distincta.

Caules elongati, pilis fulvis densissime tecti. *Folia* opposita, ovata, apice acuminata, acuta, basi rotundata, 3-5 $\frac{1}{2}$ poll. longa, 2-2 $\frac{1}{2}$ poll. lata, supra pilis aliquo modo rigidis fulvo-canescens tecta, infra pilis mollioribus densius tecta; petiolus $\frac{3}{4}$ -1 $\frac{1}{2}$ poll. longus, ut caules hirsutus. *Inflorescentia* laxa, longe pedunculata, 10-15-flora; pedunculus 6-8 poll. longus, sparse hirsutus; pedicelli $\frac{1}{2}$ -1 poll. longi, hirsuti; bracteæ lineares. *Calycis* 5-secti segmenta linearia vel ovato-linearia, glabra. *Corolla* hians; tubus perbrevis; petala duo superiora ad $\frac{2}{3}$ coalita, labium superius 4 lin. longum alte bifidum margine leviter sinuatum formantia, inferiora tria labium inferius $\frac{1}{2}$ poll. longum leviter trilobum apice obtusum formantia. *Staminum* filamenta incurva, stylo superata.

NEW GUINEA. Between the South Coast and the Owen Stanley Mountains, Burke, 356.

342. *Clerodendron Curtisii*, H. H. W. Pearson [Verbenaceæ-Viticeæ]; species inter affines distinctissima; a *C. nutante*, Wall., panícula breviorē confertiorēque, foliorum characteribus et caule fistuloso conspicue differt.

Frutex nanus. *Caulis* fistulosus, inermis, striatus, minutissime puberulus. *Folia* opposita, petiolata, membranacea, obovata, obtuse acuminata, basi rotundata, glandulosa, supra glabrescentia, subtus minutissime pubescentia, integra, nervatione prominula, nervis primariis utrinque 9-12, ascendentibus sub margines arcuatim conniventibus, nervis secundariis subparallelis; petioli crassiusculi, striati, minutissime puberuli, $2\frac{1}{2}$ -3 poll. longi; laminæ $4\frac{1}{4}$ -9 poll. longæ, $2\frac{1}{2}$ - $4\frac{1}{4}$ poll. latæ. *Panicula* terminalis, multiflora, bracteata, ramulis angulatis pubescentibus, 5-6 in. longa, $2\frac{1}{2}$ poll. diametro. *Bractee* inferiores frondosæ; superiores subulatæ, pubescentes, 1 lin. longæ. Flores aurantiaci (fide *Curtis*), pedicellis pubescentibus gracilibus suffulti. *Calyx* campanulatus, alte 5-lobatus, extus minute pubescens, intus puberulus, utrinque squamis peltatis multis vestitus; tubus $1-1\frac{1}{2}$ lin. longus; lobi lanceolati, acuminati, aperte 3-nervati, marginibus ciliatis, 2-3 lin. longi, $1-1\frac{1}{4}$ lin. lati. *Corollæ* tubus rectus, cylindricus, 8-10 lin. longus, utrinque parce puberulus, glandulis clavatis sessilibus minutis permultis instructus; lobi inæquales, subtiles, obovati vel elliptici, basi ad ungues angustati, ad margines minute ciliati, cæterum glabri, circiter 3 lin. longi. *Stamina* præfloratione intra galeam circinato-convoluta, longe exserta.

MALAYA. Dinding Islands: Bruas, in damp places, *Curtis* 3441.

343. *Aristolochia gracillima*, *Hemsley* [Aristolochiaceæ]; inter species sinenses ad *A. gentilem*, Franch., magis accedit (ex descriptione) sed floribus dimidio minoribus, perianthio non setaceo-acuminato; etiam ad *A. Pistolochiam*, Linn., accedit, differt caulibus prostratis foliis cordato-reniformibus.

Herba prostrata, undique glaberrima, caulibus gracillimis vel fere filiformibus pedalibus, internodiis quam foliis brevioribus. *Folia* longe graciliterque petiolata, membranacea, rotundato-cordata vel cordato-reniformia, $1-1\frac{1}{2}$ poll. lata, integra, subtus pallidiora, subquinenervia; petioli fere capillares, sæpius $1-1\frac{3}{4}$ poll. longi. *Flores* axillares, solitarii, circiter semipollicares, quam pedunculi capillares longiores. *Perianthium* sub-bilabiatum, tubo basi inflato-globoso deinde abrupte constricto superne cylindrico, labio postico ovato-oblongo obtuso quam tubo saltem dimidio brevior, labio antico brevissimo truncato emarginato. *Columna stylaris* brevissima, discoidea, brevissime 6-lobulata. *Capsula* (matura non visa) glabra, subglobosa, vix $\frac{1}{2}$ poll. diametro, angustissime 6-alata.

CHINA. Yunnan; Mengtze, in one shady spot only, at 4700 ft., *A. Henry*, 11,222. "Prostrate on the ground."

344. *Elatostema peltatum*, *Hemsley* [Urticaceæ-Urticeæ]; species ob folia peltata insignis.

Herba glabra vel glabrescens, circiter pedalis, caulibus debilibus ascendentibus. *Folia* petiolata, tenuia, oblique ovato-oblonga, cum petiolo 3-6 poll. longa, paullo supra basin peltata, obscure remoteque crenulata, undulata, acuminata, basi rotundata, creberrime pellucido-punctata, venis primariis paucis inconspicuis;

petioli graciles, $1\frac{1}{2}$ –2 poll. longi; stipulæ circiter semipollicares. *Receptacula* masculina (feminea ignota) graciliter pedunculata, pedunculis 1 – $1\frac{1}{2}$ poll. longis, membranacea, lobata, circiter 9 lin. diametro, bracteis tenuissimis flores singulos vestientibus. *Flores* tetrameri, perianthii segmentis oblongis.

FIJI. Vanua Levu; common in damp shady forests between Mai-mai and Loma-loma, *Horne*.

345. *Hippeastrum* (*Habranthus*) *teretifolium*, *C. H. Wright* [Amaryllidaceæ]; *H. roseo*, Baker, proximum, foliis teretibus floribusque duobus pallide roseis differt.

Bulbus pyriformis, brunneus. *Folia* teretia, acuta, 14 poll. longa, 2 lin. diam., parce glauca, synanthia. *Scapus* robustus, 9 poll. altus, 3 lin. diam., inferne vinosus, superne viridis. *Spatha* $1\frac{1}{2}$ poll. longa, ad mediam bifida, vinoso-tincta. *Flores* 2; pedicelli $1\frac{3}{4}$ poll. longi, virides. *Perianthium* pallide roseum, segmentis oblanceolatis, 2 poll. longis, 6 lin. latis. *Stamina* stylusque ut in ceteris speciebus. *Ovarium* oblongum, 3 lin. longum.

URUGUAY. Monte Video, *Cantera*, 285. Also flowered at Kew in July, 1899.

346. *Cheilanthes* (*Adiantopsis*) *trifurcata*, *Baker* [Filices-Polypodiaceæ]; ad *C. radiatam*, R. Br., magis accedit; differt frondibus multo minoribus trifurcatis.

Stipites dense cæspitosi, erecti, gracillimi, 1–2 poll. longi, nitidi, nudi, nigro-castanei. *Lamina* trifurcata, 2–3 poll. longa, rigidula, utrinque viridia, glabra, rhachi nuda nitida castanea; segmenta primaria linearia, simpliciter pinnata, lateralia terminalia minora; segmenta ultima oblonga, obtusa, sessilia, integra, $1\frac{1}{2}$ –2 lin. longa, basi cum rhachi parallela. *Sori* globosi, segregati, 1–3-jugi. *Indusium* rotundatum, viridulum, glabrum, persistens.

CENTRAL BRAZIL. Goyaz, *Glaziou*, 22637.

347. *Asplenium* (*Anisogonium*) *macrodictyon*, *Baker* [Filices-Polypodiaceæ]; a speciebus reliquis subgeneris *Anisogonii* recedit frondibus magnis tripinnatifidis, maculis magnis costalibus præditis.

Lamina ampla, deltoidea, tripinnatifida, modice firma, utrinque viridia, ad venas pubescentia; pinnæ inferiores oblongo-deltoideæ, 12–15 poll. longæ, 9–10 poll. latæ, profunde pinnatifidæ, pinnulis lanceolatis integris acuminatis deorsum 15–18 lin. latis; venæ in maculis magnis costalibus et iterum prope marginem anastomosantes. *Sori* gracillimi, a margine remoti, secus venas decurrentes. *Indusium* membranaceum, angustum, persistens.—*Arcasplenium grande*, T. Moore, MS.

COLOMBIA. Banks of the Rio Cauca, gathered by one of the collectors of Messrs. Sander, about 1884, and preserved in Herb. T. Moore, now at Kew.

A very distinct species, on which the late Mr. T. Moore proposed to found a new genus to be called *Arcasplenium*.

348. *Asplenium* (*Anisogonium*) *Wallisii*, *Baker* [Filices-Polypodiaceæ]; cum *A. hemionitideo*, *Baker*, habitu omnino congruit; differt venis arcubus costalibus more *Campteris* regulariter anastomosantibus.

Lamina oblongo-deltoidea, 18-24 poli. longa, 10-12 poll. lata, apice pinnatifida, deorsum simpliciter pinnata, modice firma, utrinque minute brunneo-pubescentia; rhachis valida, brunneo-pubescentia, haud paleacea; pinnæ 3-jugæ, oblongo-lanceolatæ, sessiles, 18-21 lin. latæ, acutæ, integræ vel repandulæ; venæ arcubus costalibus regulariter anastomosantes; venulæ 5-6-jugæ, ascendentes, sæpe anastomosantes. *Sori* graciles, secus venulas decurrentes.

COLOMBIA. Murri, *Wallis*.

349. *Polypodium* (*Goniophlebium*) *Bangii*, *Baker* [Filices-Polypodiaceæ]; ad *P. piloselloidem*, *Linn.*, accedit; differt frondibus utrinque paleis peltatis magnis ovatis membranaceis præditis.

Rhizoma gracile, longe repens, paleis lanceolatis appressis membranaceis pallide brunneis. *Lamina* lanceolata, integra, 2-3 poll. longa, 6-9 lin. lata, acuta, basi cuneata, modice firma, utrinque viridia, paleis peltatis ovatis magnis membranaceis pallide brunneis prædita; venæ in areolas costulares pentagonas uniseriatis anastomosantes, venula libera unica centrali inclusa; petiolus brevissimus. *Sori* magni, globosi, superficiales, inter costam et marginem uniseriati.

BOLIVIA. Yungas, *Bang*, 734.

350. *Acrostichum* (*Gymnopteris*) *celebicum*, *Baker* [Filices-Polypodiaceæ]; ad *A. virens*, *Wall.*, magis accedit; differt frondibus multo minoribus, pinnis pinnatifidis basi truncatis antice auriculatis.

Stipites dense cæspitiosi, graciles, nudi, 3-6 poll. longi. *Lamina sterilis* oblongo-lanceolata, 5-6 poll. longa, 2-3 poll. lata, simpliciter pinnata, utrinque viridis, dorso obscure pubescens; rhachis nuda, gracilis, pubescens; pinnæ sessiles, lanceolatæ, acutæ, 12-18 lin. longæ, deorsum 5-6 lin. latæ, leviter pinnatifidæ, lobis obtusis, basi truncatæ, antice auriculatæ; venæ pinnatæ, venulis 3-4-jugis apice anastomosantibus. *Lamina fertilis* pinnis angustioribus, stipite longiori.

CELEBES. *Curtis*, 431, *Sauvinière*, 61.

III.—NEW ORCHIDS.—DECADE 25.

241. *Masdevallia* (§ *Saccolabiatae*) *venosa*, *Rolfe*; affinis *M. pusillae*, *Rolfe*, sed facile distinguitur labelli epichilio venoso nec profunde saccato.

Folia oblongo-lanceolata, subobtusata, basi attenuata, circa 6 poll. longa, 9 lin. lata; vaginæ spathaceæ, apiculatæ, 1-1½ poll. longæ. *Scapi* ascendentes, graciles, 5-7 poll. longi, basi flexuosi, vaginis numerosis brevibus obtecti; bracteæ tubuloso-spathaceæ, apiculatæ, carinatæ, 5 lin. longæ. *Sepalorum* tubus late campanulatus, 4 lin. longus; lobi triangulari-ovati, facie puberuli, apice in caudas filiformes 6-8 lin. longas extensi. *Petala* lineari-oblonga, 1½ lin. longa, apice carnosa, subrecurva, papillosa. *Labellum* 2 lin. longum; hypochilium elliptico-oblongum, angulatum, bicarinatum, medio profunde canaliculatum; epichilium orbiculare, nec saccatum, facie carinis radiatis et callo medio instructum. *Columna* clavata, incurva, 1½ lin. longa.

COLOMBIA.

Introduced by Messrs. F. Sander & Co., with whom it flowered in June, 1899. The perianth is straw-yellow, densely spotted and more or less suffused at the base with dull purple, and the lip dull red-purple.

242. *Dendrobium* (§ *Pedilonum*) *capituliflorum*, *Rolfe*; species ex affinitate *D. purpurei*, Roxb., a quo differt floribus minoribus, sepalis petalisque angustioribus.

Pseudobulbi elongati, sulcati, foliosi, 6-10 lin. longi. *Folia* lanceolato-oblonga, subobtusata, 2½-3½ poll. longa, 8-11 lin. lata. *Racemi* laterales, dense ovoidei vel capituliformes, multiflori; bracteæ triangulares vel lanceolatæ, acutæ, 1-1½ lin. longæ; pedicelli 3-4 lin. longi. *Sepalum* posticum ovato-lanceolatum, subacutum, 2½ lin. longum; lateralia subsimilia, basi in mentum oblongum obtusum 2 lin. longum extensa. *Petala* oblongo-lanceolata, apiculata, 2 lin. longa. *Labellum* lanceolato-oblongum, acutum, 4½ lin. longum, integrum, concavum, infra medium paullo constrictum; discus lævis. *Columna* lata, 1 lin. longa.

NEW GUINEA.

Introduced by Messrs. F. Sander & Co., and flowered in their establishment in March, 1899. The flowers, which are borne in dense axillary heads, are greenish white, with the column and disc of the lip bright green.

243. *Dendrobium* (§ *Pedilonum*) *puniceum*, *Rolfe*; species ex affinitate *D. rutriferi*, Reichb. f., a quo differt floribus racemosis, petalis elliptico-oblongis.

Caules elongati, teretes, striati, 1½-2½ ped. alti. *Folia* non vidi. *Racemi* breves, multiflori, circa 1½ poll. longi; bracteæ oblongo-lanceolatæ, acutæ, 1 lin. longæ; pedicelli 6-7 lin. longi. *Sepalum* posticum late ovato-oblongum, subobtusum, 3 lin. longum; lateralia late triangulari-ovata, subobtusata, basi connata et cum

columnæ pede in mentum conico-oblongum extensa. *Petala* elliptico-oblonga, subobtusata, 3 lin. longa. *Labellum* lineari-oblongum, concavum, $5\frac{1}{2}$ lin. longum, margine prope apicem valide inflexo minute denticulato, medio subconstrictum et callo transverso membranaceo arcuato ornatum. *Columna* lata et brevissima. *Mentum* $3\frac{1}{2}$ lin. longum.

NEW GUINEA.

Imported with *Dendrobium atrovioleaceum*, Rolfe, by Messrs. F. Sander & Co., and flowered in their establishment at St. Albans in October, 1898. The flowers, together with the pedicels, are light rose-pink, with light yellow tips to the sepals and petals. They are remarkably like those of *D. rutrifolium*, Reichb. f., but are borne in racemes, not in axillary fascicles.

244. *Dendrobium quinarium*, Rolfe; *D. tetragono*, Lindl., affine, sepalis petalisque latioribus nec attenuatis, labello brevi nec recurvo, mento brevior.

Pseudobulbi fusiformi-clavati, tetragoni, 6–9 poll. longi, basi graciles, apice diphylli. *Folia* oblongo-lanceolata, acuta. *Racemi* subterminales, breves, biflori; bracteæ ovato-oblongæ, acutæ, 3–4 lin. longæ; pedicelli circa $1-1\frac{1}{4}$ poll. longi, læves. *Sepala* oblongo-lanceolata, subacuta, 13–14 lin. longa; lateralia dorsali basi paullo latiora. *Petala* oblongo-lanceolata, subacuta, sepalis subæqualia. *Labellum* subtrilobum, 9 lin. longum, expansum 9 lin. latum, lobis lateralibus rotundatis, intermedio triangulari acuto; discus quinque-carinatus, basi cum dente carnosio triangulari acuto, carinis lateralibus apice plus minus dentatis. *Columna* brevis, latissima. *Mentum* breve, obtusum, 2 lin. longum.

NEW GUINEA.

Introduced with *Dendrobium Johnsoniæ*, F. Muell., by Messrs. Hugh Low & Co., and flowered in their nursery in July, 1898. Flowers light yellow, with several light brown nerves in front of the lip.

245. *Dendrobium inæquale*, Rolfe; ad *D. euphlebiæ*, Reichb. f. accedit, differt floribus majoribus, labello plano trilobo.

Pseudobulbi tetragoni, 8–11 poll. longi, 3–4 lin. lati, basi graciles, apice diphylli; internodia numerosa, 5–6 lin. longa. *Folia* (immatura) oblongo-lanceolata, acuta. *Flores* laterales, solitarii, membranacei; pedicelli 3 lin. longi, basi bracteæ oblongis membranaceis oblecti. *Sepala* oblongo-lanceolata, acuta, 10 lin. longa; lateralia in mentum breve obtusum extensa. *Petala* sepalis subsimilia, paullo angustiora. *Labellum* latum, trilobum, 6 lin. longum, 9 lin. latum; lobi laterales ovato-oblongi, obtusi; lobus intermedius late triangularis, acutus; discus lamello oblongo erecto instructus. *Columna* lata, 2 lin. longa.

NEW GUINEA.

Introduced by Messrs. F. Sander & Co., who flowered it in March last. It is an anomalous species, apparently most allied

to *D. euphlebiu*m, Reichb. f., though very different in the shape of the lip. The flowers are white, veined on the front of the lip with purple, and are apparently very fugacious. They are produced singly from cavities at alternate nodes on the two adjacent exterior faces of the pseudobulbs, a character found in all the ten pseudobulbs on the plant.

246. *Cirrhopetalum appendiculatum*, Rolfe; inter affines ad *C. merguensem*, Par. et Reichb. f., accedit; differt sepalis lateralibus longe attenuatis.

Rhizoma repens. *Pseudobulbi* subdistantes, oblongi, subcostati, 1 poll. longi, 5 lin. lati, monophylli. *Folia* elliptica, emarginata, coriacea, sessilia, 2 poll. longa, 11 lin. lata. *Scapi* erecti, 3 poll. alti, quisque medio vagina lanceolata carinata obtectus uniflorus; bractea lanceolata, acuminata, carinata, 5 lin. longa. *Sepalum* posticum ovatum, concavum, apice caudato-setiferum, 8 lin. longum, prope apicem appendicibus foliaceis instructum; lateralia basi libera, dein fere ad apicem connata, longe attenuato-caudata marginibus involutis, apice bifida, filiformia, $2\frac{3}{4}$ –3 poll. longa. *Petala* falcato-incurva, lineari-oblonga, acuminata, 4 lin. longa, prope apicem appendicibus foliaceis instructa. *Labellum* magnum, carnosum, recurvum, ovato-oblongum, obtusum, glabrum, $4\frac{1}{2}$ lin. longum, basi concavum, marginibus erectis, disco tricarinato. *Columna* crassa, 2 lin. longa, dentibus brevibus obtusis.—*C. ornatissimum*, Hook. f. Fl. Brit. Ind. v., 773, ex parte (non Reichb. f.); King & Pantl. in Ann. Roy. Bot. Gard. Calc. viii. 95, t. 133.

INDIA: Sikkim, in warm valleys, Pantling, 197.

Flowered in the collection of H. J. Elwes, Esq., Colesbourne, Gloucestershire, in October, 1896. The dorsal sepal and petals are pale yellow, of these the dorsal sepal has three dull purple veins and a few spots near the margin, the petals have a single vein, and all are terminated by numerous purple leaf-like appendages attached by a filiform base. The lateral sepals are speckled with reddish purple on a lighter ground. The lip is rosy purple with dark purple margins, keels and numerous spots. It is very distinct from *C. ornatissimum*, Reichb. f., with which it has been confused.

247. *Panisea tricallosa*, Rolfe; ad *P. apiculatam*, Lindl., accedit; recedit labelli disco tricalloso.

Rhizoma validum. *Pseudobulbi* approximati, globosi vel ovoidei, diphylli, 6–7 lin. longi. *Folia* breviter petiolata, oblongo-lanceolata, acuta, 2–3 poll. longa, 4–7 lin. lata. *Flores* in scapo solitarii; scapi $\frac{3}{4}$ –1 poll. longi, basi vaginis imbricatis obtecti. *Sepala* ovato-oblonga, apiculata, carinata, 6–7 lin. longa, lateralia obliqua. *Petala* elliptico-oblonga, apiculata, 6–7 lin. longa. *Labellum* obovatum, subapiculatum, 7–8 lin. longum, 4–5 lin. latum, basi late unguiculatum, sigmoideo-curvatum; discus trinervis, tricallosus. *Columna* clavata, marginata, 3 lin. longa.

ASSAM.

Flowered in the Royal Botanic Gardens, Glasnevin, in April, 1896. The flowers are pale translucent yellowish green, with three yellow calli on the disc, tipped with brown.

248. *Catasetum quadridens*, Rolfe; affinis *C. cornuto*, Lindl., sed ab omnibus speciebus generis rostello quadridentato differt.

Pseudobulbi ovoidei, $1\frac{1}{2}$ –2 poll. longi, 2–3-phylli. *Folia* lanceolata, acuminata, circa 6 poll. longa, $1\frac{1}{4}$ poll. lata. *Scapus* masculinus suberectus, 6 poll. longus; flores circa 4; bracteæ lanceolato-oblongæ, acutæ, 3–4 lin. longæ; pedicelli 8–10 lin. longi. *Sepala* lanceolato-oblonga, acuta, incurva, concava, circa 10–12 lin. longa; lateralia patentia. *Petala* sepalis similia. *Labellum* 8 lin. longum, deltoideo-oblongum, apiculatum, lateribus reflexum, spinoso-dentatum, prope apicem in cristam oblongam subobtusam tumescens, supra basin umbonatum, infra medium leviter concavum. *Columna* clavata, 9 lin. longa, apice rostrata; rostellum antennæ graciles, æqualiter incurvæ, approximatae, utrinque dente brevi infra antennam instructæ.

HABITAT UNKNOWN.

A plant of this species was purchased at the sale of the Hon. Walter Rothschild's collection, and flowered at Kew, in December, 1898. The flowers are remarkable for the presence of a pair of short, acute teeth, situated at the lower angles of the abortive stigma, in addition to the usual pair of antennæ. The flowers are light green, blotched all over with dark brown.

249. *Ornithocephalus multiflorus*, Rolfe; ab omnibus speciebus differt pseudobulbis, etiam (*O. grandifloro*, Lindl., excepto) foliis non ensiformibus.

Planta dense cæspitosa. *Pseudobulbi* ovoidei, basi et apice diphylli, $2\frac{1}{2}$ – $3\frac{1}{2}$ lin. longi. *Folia* lanceolata vel oblongo-lanceolata, subacuta, subcarnosa, $\frac{3}{4}$ – $1\frac{1}{2}$ poll. longa, 2–3 lin. lata. *Racemi* graciles, subflexuosi, $3\frac{1}{4}$ – $4\frac{1}{2}$ poll. longi, multiflori; bracteæ lanceolatae, acutæ, $\frac{3}{4}$ – $1\frac{1}{2}$ lin. longæ. *Pedicelli* $2\frac{1}{2}$ –3 lin. longi, graciles. *Sepala* reflexa, ovata, subobtusata, concava, $\frac{3}{4}$ lin. longa. *Petala* patentia, late unguiculata, $1\frac{1}{2}$ lin. longa; limbus reniformi-orbicularis, minutissime crenulatus, $1\frac{1}{2}$ lin. latus. *Labellum* pandurato-oblongum, obtusum, supra medium concavum, 2 lin. longum; callus magnus, suborbicularis, apice incurvo-apiculatus. *Columna* lata; alis falcato-linearibus acutis $\frac{1}{2}$ lin. longis; rostellum lineare, incurvum, $\frac{3}{4}$ lin. longum.

BRAZIL. Glaziov, 17789; Binot.

In cultivation at Kew, where it flowered in June, 1898. It is a very graceful and floriferous species. The flowers are white, with the exception of the incurved apex of the crest, which is bright green. In habit it is remarkably distinct.

250. *Aeranthès caudata*, Rolfe; affinis *A. grandifloræ*, Lindl., differt scapo graciliore, floribus minoribus, sepalis petalisque longe caudatis, labelli calcar cylindraceo.

Folia lineari-oblonga, apice subattenuata, subobtusata, $7\frac{1}{2}$ poll. longa, 10 lin. lata, submembranacea. *Scapus* gracilis, elongatus, 10 poll. longus, apice breviter ramosus, triflorus; bracteae lanceolatae, acuminatae, 3-4 lin. longae; pedicelli 7 lin. longi. *Sepala* triangulari-ovata, in caudas graciles longissime extensa, $4\frac{1}{2}$ poll. longa, basi 4 poll. lata. *Petala* sepalis similia, sed caudae duplo breviores. *Labellum* rhomboideo-ellipticum, apice in caudam brevem extensum, 2 poll. longum, medio 8 lin. latum; calcar cylindraceum, obtusum, incurvum, $4\frac{1}{2}$ lin. longum. *Columna* 2 lin. longa.

MADAGASCAR.

A distinct and remarkable species which flowered at the Royal Botanic Gardens, Glasnevin, in August last. The sepals and petals are pale pellucid green, and the lip greenish white.

IV.—FUNGI EXOTICI, III.

RUSSIAN ASIA.

ASCOMYCETES.

Phyllachora Heraclei, *Fuckel*, *Symb. Myc.* (1869) p. 219.

TURKESTAN. On *Heracleum lanatum*, Michx., Alatau Mts., Little Kebir river, *Regel*.

HYPHOMYCETES.

Coniothecium Acanthophylli, *Massee*. *Pulvini* primo epidermide tecti, dein erumpenti-superficiales, effusi, saepe totam matricem obtegentes, nigerrimi, e globoso subhemisphaerici, minuti, 300-400 μ diam. *Conidia* subglobosa, trigona vel e mutua pressione difformes, 2-5-cellulosa, ad confluentiam cellulorum non vel levissime constricta, flavo-brunnea, episporio glabro, 40-60 μ diam.

TURKESTAN. On stem and leaves of *Acanthophyllum spinosum*, C. A. Mey., near Merv, *Regel*.

CHINA.

ASCOMYCETES.

Gnomoniella Coryli, *Sacc. Syll. i.* (1882) no. 1590.

SZECHUEN. On living leaves of *Corylus Colurna*, Linn., var *chinensis*, Burkill North Wushan, A. Henry 7111.

INDIA.

BASIDIOMYCETES.

Lepiota cepæstipes, Sacc. *Syll.* v. (1887) p. 43.

BOMBAY PRESIDENCY. On the ground, Poona, Woodrow, 57.

Not uncommon in hot-houses in England.

Lepiota Beckleri, Sacc. *Syll.* v. (1887) p. 56.

BOMBAY PRESIDENCY. On the ground, Poona, Woodrow.

Lepiota excoriata, Karsten., *Skand. Hattsv.* i. (1879) p. 8.

BENGAL PRESIDENCY. On the ground, Poona, Woodrow, 63.

Pleurotus membranaceus, Massee (*sp. nov.*). *Pileus* membranaceus, dimidiatus, flabelliformis, margine ut plurimum lobatus, albus, glaber, 5-7 cm. latus. *Lamellæ* subconfertæ, angustæ, albæ, postice decurrentes. *Spore* ovato-oblongæ, hyalinæ, 9-10 × 5-6 μ .

BOMBAY PRESIDENCY. On trunks, Poona, Woodrow, 80.

Allied to *Pleurotus versiformis* Berk., which differs in having a short stem and decurrent gills.

Pholiota indica, Massee (*sp. nov.*). *Pileus* carnosus, e conico-campanulato expansus, siccus, squamis concentricis adnatis ornatus, brunneolus, versus marginem albidus, 3-8 cm. latus. *Lamellæ* adnexæ, latæ, subdistantes, umbrinæ. *Spore* subglobosæ, umbrinæ, 9-10 × 7-8 μ . *Stipes* fæctus, æqualis, basi subincrassatus, albus, usque ad annulum remotum peronatus.

BOMBAY PRESIDENCY. On the ground, Poona, Woodrow, 58.

Allied to *Pholiota radicata*, Bull.

Flammula sapinea, Karsten, *Skand. Hattsv.* i. (1879) p. 410.

PUNJAB. Chitral Relief Expedition, Mirga Forest, 9000 ft. Duthie, 17,670.

Bolbitius grandiusculus, Cooke & Massee in *Grevillea*, xviii. (1890), p. 53.

BOMBAY PRESIDENCY. On the ground, Poona, Woodrow, 60.

Agaricus Woodrowii, Massee (*sp. nov.*). *Pileus* subglobosus, glaber, primitus lævis, dein centro rimoso-areolatus, ex albidofuscens, 3-5 cm. latus; caro 1 cm. lata, fuscens. *Lamellæ* confertæ, liberæ sed approximatae, umbrinæ. *Spore* ellipticæ, glabræ, umbrinæ, 8 × 5 μ . *Stipes* ventricosus, albidus, deorsum fuscens, glaber, 3-5 cm. longus; annulus superus, evanescens.

BOMBAY PRESIDENCY. On the ground, Poona, Woodrow, 61.

Edible. Allied to *Agaricus silvaticus*, Schaeff.; distinguished from this and all known species by the ventricose stem, and crowded approximate gills.

Stropharia merdaria, Karsten, *Skand. Hattsv.* i. (1879) p. 491.

BOMBAY PRESIDENCY. On dung, Poona, Woodrow, 52.

Psathyra nana, *Massee* (sp. nov.). *Pileus* e convexo explanatus, lævis, glaber, siccus, albidus, 1-2 cm. latus. *Lamellæ* confertæ, angustæ, annexæ, purpureo-brunnæ, acie integræ concolores. *Sporæ* ellipsoideæ, læves, purpureo-brunnæ, $9 \times 7 \mu$. *Stipes* 3 cm. longus, vix 1 mm. crassus, fistulosus, candidus.

BOMBAY PRESIDENCY. On the ground, Poona, *Woodrow*, 56.

Allied to *Psathyra obtusata*, Fries.

Polystictus Gleadowii, *Massee*, (sp. nov.). *Pileus* semiorbicularis, dimidiatus, sessilis, e convexo planus vel depressus, niveo-tomentosus, dein subglabrescens, margine incurvo, 4-5 cm. latus. *Pori* angulati, albo-straminei. *Caro* fibrosa, alba, tenuissima. *Sporæ* albidæ, ellipticæ, 6-7 \times 4 μ .

N. W. PROVINCES. On dead wood, Dehra Dun, *Gamble*, 27,481.

Allied to *Polystictus virgineus*, Cooke, but differing in the snow-white tomentose pileus, and smaller pores, whose average diameter is $\frac{1}{3}$ mm.

Hydnum coralloides, *Scop.*, *Flora Carn.* ii. (1760) p. 472.

PUNJAB. Chitral Relief Expedition, *Duthie*, 17,668.

Stereum nitidulum, *Berk.* in *Hook. Lond. Journ.*, Bot. ii. (1843) p. 638.

BOMBAY PRESIDENCY. On rotten wood, Poona, *Woodrow*, 55.

Hirneola polytricha, *Fries* in *Kongl. Vetensk. Akad. Händl.* 1848, p. 121.

BOMBAY PRESIDENCY. On dead wood, Poona, *Woodrow*, 50.

Battarrea lævispora, *Massee* (sp. nov.). *Peridium* globoso-depressum, glabrum, albidum, 4-6 cm. latum. *Gleba* croceo-ochracea. *Stipes* undique squamis paleisve tectus, deorsum attenuatus, 8-12 cm. longus. *Volva* libera, magna, vaginalis, limbo lobata, albida. *Sporæ* dilute ochraceæ, subglobosæ, glabræ, 6-7 μ diam.

BOMBAY PRESIDENCY. On the ground, Poona, *Woodrow*, 64.

Allied to *Battarrea Muelleri*, *Kalchbr.*: from which it differs in the smooth spores and ample volva.

Geaster fimbriatus, *Fries*, *Syst. Myc.* iii., (1829) p. 16.

PUNJAB. On the ground, Chitral relief expedition, *Duthie*, 17,668.

ASCOMYCETES.

Humaria coccinea, *Massee* (sp. nov.). *Ascomata* .5-1.5 cm. lata, gregaria vel subsparsa, primo subglobosa, dein explanata, extus margineque pallida, laxè pilosa; disco coccinea vel aurantiorubra. *Asci* cylindracei, iodo haud tincti, $270 \times 17 \mu$, octospori. *Sporæ* monostichæ, hyalinæ, ellipsoideæ, diu glabræ, dein verrucosæ, continuæ, $22-23 \times 14-15 \mu$. *Paraphyses* clavatæ, septatæ.

N.W. PROVINCES. Garhwal, at 7,000 ft., *Gamble*, 27,289.

Closely allied to *Humaria melaloma*, Massee, especially in having the margin and outside sparsely covered with short brown sparingly septate hairs; differing in the much larger warted spores.

Chlorosplenium æruginosum, *De Not., Prop. Rett. Discom.* (1864) p. 22.

N.W. PROVINCES. Mandali, Zaunsar, at 8-9,000 ft., *Duthie*, on fallen wood that had become deep verdigris green, due to the presence of the fungus. Ascophores of the fungus were also present.

HYPHOMYCETES.

Sporodesmium Brassicæ, *Massee (sp. nov.)*. *Maculae* amphigenæ, nebulosæ, indeterminatæ, sæpe confluyendo diffformes, olivaceo-griseæ. *Spore* obclavatæ, pallide brunneæ, septatæ, ad septa vix constrictæ (septis 7-9 transversalibus, nonnullis etiam longitudinalibus), 160-200 \times 25-35 μ .

BENGAL. On the pods of *Brassica campestris*. Linn., var. *Sarson*, Prain, Tehroot, *Watt*.

A parasite doing considerable damage to the crop. The sporophores are fasciculate and short.

Rhinocladium corticolum, *Massee (sp. nov.)*. *Acervuli* orbiculares, vel irregulares, 2-3 cm. diam., effuso-superficiales, velutini, nigro-olivacei. *Hyphæ* steriles repentis, dense intricato-ramosæ, septatæ, olivaceæ, 5-7 μ crassæ, hic inde hyphas fertiles gerentes; hyphæ fertiles erectæ, concolores, apices versus pallescentes. Conidia ad apice producta, globosa, olivacea, episporio densissime et minutissime tuberculata, 15-18 μ diam.

BOMBAY PRESIDENCY. On the bark of a living mango, *Mangifera indica*, Linn., Poona, *Woodrow*.

The numerous patches of the fungus at times almost cover the bark at diseased spots.

CEYLON.

ASCOMYCETES.

Leciographa Brownii, *Massee (sp. nov.)*. *Ascomata* erumpentia, elongata, recta seu torta, applanata, nigra, 4-6 \times 2 mm. *Asci* elongato-clavati, octospori. *Spore* oblongo-fusoideæ, 5-7-septatæ, brunneæ, 35-40 \times 9-10 μ . Paraphyses filiformes, ramosæ, ascos superantes.

On dead bark, *Brown*.

Distinguished from its allies by the much larger spores. Apothecia gregarious.

STRAITS SETTLEMENTS.

BASIDIOMYCETES.

Leptonia bicolor, *Massee* (*sp. nov.*). *Pileus* submembranaceus, conicus, umbilicatus, lævis, glaberrimus, pallide roseus, 3–5 cm. altus. *Lamellæ* confertæ, annexæ, angustæ, albidæ, dein incarnatæ. *Sporæ* oblongæ, nodulosæ, incarnatæ, $10-11 \times 7 \mu$. *Stipes* fistulosus, sursum attenuatus, glaber, nitens, pileo concolor, 8–10 cm. longus, 6–8 mm. crassus.

SINGAPORE. On the ground, *Ridley*.

Most nearly allied to *L. tricolor*, *Massee*. These Eastern species differ essentially from European forms in the absence of blue or violet colour of the stem.

Leptonia tricolor, *Massee* (*sp. nov.*). *Pileus* submembranaceus, e convexo plano-depressus, virgatus, lilacinus, 2–3 cm. latus, margine striatulo incurvo. *Lamellæ* annexæ, angustæ, subdistantes, incarnatæ, acie serrulatæ. *Sporæ* subglobosæ, apiculatæ, 8–9 μ diam. *Stipes* farctus, sursum attenuatus, albidus, glaber, 5–6 cm. longus, 6–7 mm. crassus.

PENANG. On the ground, *Ridley*.

A showy and distinct species, distinguished by the virgate lilac pileus, flesh-coloured gills, and white stem. Allied to *L. serrulata* Fries, but nearest to *L. bicolor*, *Massee*.

Xerotus papyraceus, *Berk. in Hook. Fl. Tasm.* ii., (1860), p. 250, tab. clxxxii., fig. 2.

PENANG. On brickwork and wood, *Ridley*.

Clavaria ornithopoda, *Massee* (*sp. nov.*). *Caulis* tenuis, 1 cm. longus, ad apicem ramos 3–5 flabelliformes gerentes, ramuli ultimi terminales, aculeati, nodulosi, arcuati; rami ramulique pallide ferruginei (in spiritu vini). *Basidia* anguste clavata, tetraspora. *Sporæ* ellipticæ, hyalinæ, glabræ, $6-7 \times 4 \mu$.

PENANG. On the ground, *Ridley*.

A remarkable species, each primary branch terminating in 3–4 tapering nodulose curved branchlets, the whole resembling a partly closed bird's foot.

Clavaria bicolor, *Massee* (*sp. nov.*). *Caulis* robustus, brevis, circiter 1 cm. crassus longusque; rami ramulique numerosi, cylindricei, pallide umbrini, apicibus cristato-multifidis amethystinis. *Basidia* clavata, tetraspora. *Sporæ* hyalinæ, subglobosæ, asperatæ, $9 \times 7-8 \mu$ diam.

PENANG. Garden jungle, *Ridley*.

Entire fungus 7–8 cm. high; allied to *C. amethystina*, Bull.

Clavaria fragilis, *Holmsk. Fungi Dan.* i. (1799) p. 7.

SINGAPORE. *Ridley*.

Boletus Ridleyi, *Massee* (*sp. nov.*). *Pileus* convexo-planus, lævis, glaber, citrinus, 2–3 cm. latus; caro alba, lutescens, sapore dulcis.

Tubuli flavo-virentes, stipiti adnati, 3-4 mm. longi; pori angulati, ampli. *Spore* flavo-viridæ, ellipticæ, $7-8 \times 5 \mu$. *Stipes* solidus, subæqualis, glaber supra annulum evanescentem albus, infra citrinus, 4 cm. longus, 5-7 mm. crassus.

SINGAPORE. On the ground, Garden jungle, *Ridley*.

A neat species, characterised by the yellow colour, and short spores. Allied to *B. chrysenteron*, Fries, but differing in the glabrous pileus and much shorter spores.

Favolus ruficeps, Berk. & Broome in Journ. Linn. Soc. (Bot.), xiv. (1875), p. 57.

SINGAPORE. On wood, *Ridley*.

ASCOMYCETES.

Rosellinia echinata, Massee (sp. nov.) *Perithecia* majuscula, 1-1.5 mm. diam., densissime aggregata, globoso-depressa, superne convexo-applanata, centro papillata, atra, fragilia, echinata. *Asci* cylindracei, apice truncati, incrassati, octospori. *Spore* oblique monostichæ, fusiformi-naviculares, utrinque acutissimæ, opace brunneæ, 1-2-guttulatæ, glabræ, $90-100 \times 12 \mu$. *Paraphyses* filiformes, subinde ramosæ, 2.5μ crassæ.

SINGAPORE. On roots of a tree of *Ficus dubia*, Wall., and other plants near it. Botanic Gardens, *Ridley*.

A very destructive parasite, closely allied to *Rosellinia radiciperda*, Massee, and *R. Necatrix*, Prill., and spreading in a similar manner by means of subterranean mycelium, and conidial fruit. The following note accompanied the specimens. "Some months ago all the shrubs in a jungly bit of the garden at the foot of a large *Ficus dubia* began to die, turning black, and the long roots of the *Ficus* did the same. At first I thought some weed-killer had been carelessly thrown into the wood, but the thing increased, every plant withered and died, looking as if acid or boiling water had been thrown upon it. All kinds of Dicotyledonous shrubs and herbs, rattans, dracaenas, and even some dieffenbachias turned black and rotted. At last the thing developed on the fig roots, and on the collar and roots of all the trees and shrubs around, and appears to be a deadly fungus."

QUEENSLAND.

ASCOMYCETES.

Glœocalyx, Massee (gen. nov.). *Ascomata* subgelatinosa, sessilia, cupulata, extus reticulata, glaberrima. *Asci* cylindracei, apice truncati, octospori. *Spore* 1-seriatæ, hyalinæ, ellipticæ, aseptatæ. *Paraphyses* filiformes.

Allied to *Bulgariella*, Sacc., from which the present genus differs in having hyaline spores.

Glœocalyx Bakeri, Massee (sp. nov.). *Ascomata* sessilia, cupulata, subgelatinosa, glabra, sicco cornea, corrugata, extus reticulato-venosa, ubique atra vel disco pallida, 1-2 cm. lata. *Asci*

cylindræ, 320–330 \times 17–18 μ . *Sporæ* 1-seriatæ, cylindræ, continuæ, curvulæ, hyalinæ, 30 \times 10 μ .

On decaying logs Tumbulgum, *Baker*, 9.

Usually caespitose; substance thin, much contracted and horny when dry. Spores exactly sausage-shaped.

UREDINEÆ.

Æcidium Plectroniae, *Cooke in Grevillea*, x. (1882), p. 124.

Mount Cook, Endeavour river, on leaves of *Plectronia barbata*, Benth. & Hook., *Bailey*, 1130.

SPHEROPSIDEÆ.

Phoma sycophila, *Massee (sp. nov.)*. *Perithecia* minuta, atra, numerosissima, dense congesta, epiphylla, maculas decolorantes longe lateque formantia. *Sporulæ* hyalinæ, cylindræ, utrinque obtusæ, rectæ vel curvulæ, 17–20 \times 4–4.5 μ .

Mount Cook, Endeavour river, on living leaves of a *Ficus*, *Bailey*, 1131.

The fungus forms large discoloured patches, often occupying the greater portion of a leaf. *Perithecia* slightly prominent when dry, level with the surface of the leaf when the latter is damp.

Pestalozzia vermiformis, *Massee (sp. nov.)*. *Acervuli* epiphylli, gregarii, maculis pallidis subcircularibus insidentes. *Conidia* fusiformia, 4–5-septata; loculi extremi hyalini, medius olivaceus, cellula summa setulas ternas divaricatas gerente, 25–32 \times 5–6 μ .

MOUNT COOK, Endeavour river, on living leaves of an *Eugenia*, *Bailey*, 1132.

Distinguished from its allies by the conidia having four median olive-coloured cells. *P. Eugenie*, Thüm., differs also in having the acervuli arranged concentrically, and the pale patches on which they are seated bordered by a broad purplish zone of colour.

TASMANIA.

BASIDIOMYCETES.

Amanita grisea, *Massee et Rodway (sp. nov.)*. *Pileus* carnosus, e convexo depressus, lævis, glaber, griseo-brunneus, 3–5 cm. latus, *Lamellæ* latæ, ventricosæ, subdistantes, ex albido pallidæ. *Sporæ* globosæ, glabræ, 9–10 μ diam. *Stipes* subæqualis, solidus, albidus, 4–5 cm. longus, 1 cm. crassus; volva libera, persistens; annulus membranaceus.

On the ground, *Rodway*, 145.

Distinguished by the free, persistent volva. Approaching the genus *Amanitopsis* in the somewhat rudimentary ring, which is nevertheless obvious.

Marasmius rugulosus, *Berk. et Curt. in Journ. Linn. Soc. (Bot.)*, x. (1869), p. 294.

On dead sticks, leaves, &c., *Rodway*, 93.

Marasmius proximus, *Berk. et Broome in Journ. Linn. Soc. (Bot.)*, xiv. (1875), p. 37.

On dead *Eucalyptus* bark, *Rodway*, 130.

Hydnum udum, *Fries, Syst. Myc.* i. (1821), p. 422.

On dead wood, *Rodway*, 627.

Hydnum pexatum, *Massee (sp. nov.)*. *Subiculus* resupinatus, late et irregulariter effusus, submembranaceus, ochraceus. *Aculei* conferti, breves, acutiusculi, apice subincisi, nonnulli lævissime umbilicati. *Spore* ellipsoideæ, hyalinæ, $7 \times 5 \mu$.

On dead wood, *Rodway*, 340.

The fungus assumed a dull blood-red colour when moistened with potassium hydrate.

Hydnum mucidum, *Pers., Syn.* (1808), p. 561.

On dead wood, *Rodway*, 287.

Hydnum isidioides, *Berk. in Hook. Lond. Journ. Bot.*, iv. (1845), p. 58.

On rotten wood.

TASMANIA. *Rodway*, 161.

The specimen agrees with Berkeley's type of the above-named fungus; nevertheless its proper position would appear to be in the genus *Irpex*.

Irpex depauperatus, *Massee (sp. nov.)*. *Subiculus* resupinatus, tenuis, cervinus, ambitu tomentosus, albidus. *Aculei* subconferti, obsolete reticulato-convexi, breves, lateribus subincisi. *Spore* ellipsoidæ, hyalinæ, $6 \times 3-4 \mu$.

On dead bark, *Rodway*, 496.

Patches at first small and often more or less orbicular, finally confluent and forming irregular expansions 3-5 cm. across.

Læstadia insidiosa, *Massee (sp. nov.)*. *Perithecia* epiphylla, semi-inmersa, discoidea, atra, plus minus dense aggregata, astoma, 300-350 μ diam. *Asci* clavati sæpe curvati, apice obtusati, octospori, 150 \times 20 μ . *Spore* distichæ, oblongo-ellipticæ, hyalinæ, continuæ (an semper?), 21-25 \times 6-7 μ . *Paraphyses* nullæ, *Rodway*, 547.

Superficially resembling *Læstadia destructiva*, Sacc., a species parasitic on leaves of lucerne (*Medicago sativa*, Linn.) ; differing in the much larger asci and spores.

Odontia scopinella, *Berk. in Hook. f. N. Zeal. Fl.* (1864), p. 181.

On rotten wood, *Rodway*, 237.

Grandinia australis, *Berk. in Hook. f. Fl. Tasm.* (1860), p. 257.

On decayed wood, *Rodway*, 341.

Hypochnus chlorinus, *Massee* (sp. nov.). *Subiculum* latissime effusum, membranaceum, subsecedens, subtus et ambitu fibrillosum. *Hymenium* chlorinum, densissime granulosum. *Basidia* clavata, apice truncata, $11-13 \times 5 \mu$, 4-sterigmata. *Spore* globosæ, hyalinæ, 4μ diam.

On wood and bark, *Rodway*, 449.

Forming broadly effused yellowish-green granulose or pulverulent patches, much resembling the soredial condition of some *Lecidea*.

Lycoperdon tasmanicum, *Massee* (sp. nov.). *Peridium* obovatum, membranaceum, sordide ochraceum, verrucis pyramidatis demum deciduis ornatum, basi fibrillis longis repentibus radicante; basis sterilis distincta. *Gleba* dilute brunnea; capillitii hyphæ subhyalinæ, ramosæ. *Spore* globosæ olivaceo-brunneæ, verruculosæ, 4μ diam.

On the ground, *Rodway*, 566.

Varying from 3-6 cm. high, superficially resembling *Lycoperdon piriforme*, Fries, but distinguished by the minutely warted spores, and the almost colourless capillitium as seen when the spores have been blown away.

Secotium Rodwayi, *Massee* (sp. nov.). *Peridium*, 2-3 cm. latum, globoso-depressum, tomentosum, ochraceo-albidum, inferne profunde excavatum. *Spore* globosæ, verruculosæ, subhyalinæ, plerumque stipitatæ, $7-8 \mu$ diam. *Stipes* brevissimus, primitus infra furfuraceus, cavus.

Subterranean, *Rodway*, 571 with fig.

Underground, and only exposed when washed out or dug up by small marsupials.

Hymenogaster albidus, *Massee et Rodway* (sp. nov.). *Peridium* globoso-difforme, 1-2 cm. diam., floccosum, sordide albidum, demum lutescens. *Gleba* brunnea, firma, cellulis tortuosis majusculis e basi ipsa sterili vix conspicuis. *Spore* ellipsoideæ, utrinque obtusæ, longitudinaliter carinatæ, flavo-brunneæ, $21-28 \times 14-18 \mu$, in quoque basidio binæ.

Occurring underground, *Rodway*, 643.

Allied to *Hymenogaster Rodwayi*, *Massee*; differing in the larger cavities of the gleba and obsolete sterile base.

Hysterangium affine, *Massee et Rodway in Kew Bull.* (1898), p. 127, var. *irregulare*, *Massee* (var. nov.). Differt præcipue peridio vix regulariter subgloboso tenuiore, gleba fuscescente, sporis minoribus.

Underground, *Rodway*, 657.

ASCOMYCETES.

Peziza plicata, *Massee et Rodway* (sp. nov.). *Apothecia* sessilia subtus attenuata, primum concava, dein explanata, margine plicata vel nonnulla crenulata, extus albida, granulosa; discus late brunneus. *Asci* cylindraceo-clavati, octospori, $150 \times 10 \mu$, iodo haud tincti. *Spore* hyalinæ, ellipticæ, glabræ, 1-seriatæ, $10 \times 5 \mu$. *Paraphyses* graciles, sat numerosæ, apice leviter incrassatæ, brunneæ.

On partly buried branches, *Rodway*, 663.

Gregarious to densely caespitose. Allied to *Peziza sepiatra*, Cooke, differing in the smaller spores and plicate margin of the ascophore.

Helotium prasinum, *Massee* (sp. nov.). *Ascomata* sparsa aut laxe gregaria, .5–1 mm. lata, extus stipiteque brevi furfuraceo mox glabra, pallida, margine integerrima; discus chlorinus, concavus, dein convexo-planus. *Asci* cylindraceo-clavati, apice iodo haud tincti, octospori, $80 \times 6 \mu$. *Spore* monostichæ, oblongæ, rectæ, hyalinæ, $6-7 \times 2-2.5 \mu$. *Paraphyses* bifformes, hæ filiformes hyalinæ, illæ clavatæ superne chlorinæ.

On dead wood, *Rodway*, 565.

The stem is sometimes tinged reddish brown. Allied to *Helotium rhizogenum*, Ellis & Everh.

Phæopezia ochracea, *Massee et Rodway* (sp. nov.). *Ascomata* cupulata, substipitata, marginibus undulatis, extus albidus, glabra, .5–1 cm. lata; discus pallide ochraceus. *Asci* cylindracei, octospori, $200 \times 10 \mu$. *Spore* oblique 1-seriatæ, ellipticæ, utrinque subacutæ, glabræ, brunneo tinctæ, $15-18 \times 6-7 \mu$. *Paraphyses* filiformes, subclavatæ.

On the ground, gregarious or caespitose; Cascades, *Rodway*, 125, 650, 650a.

Distinguished from all known species by the pale coloured ascophore and fusiform spores.

Cerion, *Massee* (gen. nov.). *Ascophora* erumpentia, cerata, marginata, sessilia, hymenio plano læte colorato. *Asci* cylindrici, octospori. *Spore* filiformes, hyalinæ, multiseptatæ. *Paraphyses* filiformes.

Growing on dead wood, *Rodway*.

Allied to the genus *Schizoxylon*, distinguished by the prominent free entire margin and the brightly coloured disc. The spores break up into segments through the septa when mature. Entire substance of the fungus waxy.

Cerion coccineum, *Massee et Rodway* (sp. nov.). *Ascophora* immersa, margine suberecto, nigricantia, 1 mm. lata, hymenio obscure coccineo. *Asci* cylindracei, $150-160 \times 7-8 \mu$, octospori. *Spore* clavato-filiformes, $130-140 \times 2 \mu$, multiseptatæ. *Paraphyses* filiformes, subclavatæ, apice roseo tinctæ.

On dead wood, *Rodway*, 654.

Scattered or crowded. Spores for a long time continuous, then multiseptate, finally breaking up at the septa into cells about $8-10 \mu$ long.

Propolis faginea, *Karsten*, *Myc. Fenn.* i. (1871), p. 244.
On dead branches, *Rodway*, 625.

Karschia Atherospermæ, *Massee et Rodway* (sp. nov.). *Ascophora* erumpentia, carnosa, convexo-plana, atra, glaberrima, .5 mm. lata. *Asci* clavati, octospori, iodo haud tincti, $50-60 \times 12-14 \mu$.

Spore biseriatæ, elliptico-oblongæ, 1-septatæ, loculo supero majusculo, fuliginæ, $18-20 \times 7-8 \mu$. *Paraphyses* clavatæ, apice brunneo tinctæ.

On dead twigs and leaves of *Atherosperma moschatum*, Labill., Hobart, *Rodway*, 628.

Allied to *K. buellioides*, Sacc.

Asterina Systema-solare, *Massee* (sp. nov.). *Perithecia* gregaria, mycelio maculiformi atro insidentia, sphæroideo-depressa, glabra, $90-100 \mu$ lata. *Asci* cylindræo-clavati, breviter pedicellati, octospori, $50-55 \times 12 \mu$. *Spore* distichæ, obovatæ, uniseptatæ, fusciculæ, loculo superiore majore, obtusatæ, $9-10 \times 5 \mu$.

On the upper surface of leaves of *Banksia marginata*, Cav., *Rodway*, 540.

Patches of mycelium irregularly scattered, 1-2 mm. across. *Parodiella Banksiæ* is present on the under surface of the same leaves (Kew Bull. 1899, 181), and bears a superficial resemblance to the present species, but differs in having globose perithecia, which are densely crowded in irregular patches .5-1 cm. diameter.

USTILAGINEÆ.

Ustilago microspora, *Massee et Rodway* (sp. nov.). *Sori* paniculas totas implectentes, easque in massam pulveraceam transformantes, obscure fulvi. *Spore* globosæ, $3-3.5 \mu$ diam., vel subglobosæ, $3-4 \times 2-2.5 \mu$ diam., glabræ, dilute olivaceæ.

Attacking the inflorescence of *Danthonia penicillata*, F. Muell, *Rodway*.

The entire inflorescence of the host is destroyed. The species is remarkable for the minute smooth spores.

PHYCOMYCETES.

Pilobolus pullus, *Massee* (sp. nov.). *Sporangia* hemispherico-depressa, atra, glabra, $250-300 \mu$ lata; columella convexa, sæpe medio constricta. *Spore* ellipticæ, episporio aurantiaco, $10-12 \times 8-9 \mu$. *Stipes* albidus, apice ventricosa-inflatus, 1 mm. altus.

On cow dung, *Rodway*, 551.

Allied to *Pilobolus Kleinii*, Van Tiegh., from which it differs in the spherico-depressed smooth sporangium, and convex columella.

MELANCONIÆ.

Melanconium Eucalypti, *Massee et Rodway* (sp. nov.). *Acer-vuli* densissime gregarii, erumpentes epidermideque alba laciniata cincti, $350-400 \mu$ diam. *Conidia* oblonga, apice subacuta, fuliginea, $25 \times 31 \times 10-13 \mu$.

On fruit of *Eucalyptus globulus*, Labill., *Rodway*, 666.

It forms large white patches on the fruit. When the conidia are mature and ready for dispersion the epidermis is ruptured in a stellate manner, and through the cavity formed the conidia ooze out in a tendril.

NEW CALEDONIA.

MELANCONIÆ.

Diplodia Ochrosiæ, *Massee* (sp. nov.). *Perithecia* in corticem immersa, 2-3 aggregata, globosa, ostiolo minuto papillulato, coriaceo-membracea, atra, 300 μ diam. *Sporulæ* ellipticæ vel ovoideæ, utrinque obtusatæ, glabræ, 1-septatæ, nec constrictæ, subopacæ e fusco violaceæ, sterigmatibus brevissimis hyalinis suffulta, 25-30 \times 12-16 μ .

On fruit of *Ochrosia elliptica*, Labill, *Herb. Webb*.

Distinguished among its allies by the minutely papillate perithecium and the large violet spores.

WEST TROPICAL AFRICA.

BASIDIOMYCETES.

Collybia olivacea, *Massee* (sp. nov.). *Pileus* tenuis, e convexo applanatus, lævis, glaber, siccus obscure olivaceus, marginem versus pallidior, 4 cm. latus. *Lamellæ* confertæ, angustæ, postice annexæ, albidæ, acie integræ. *Sporæ* ellipsoideæ, læves, 8-5 μ . *Stipes* cylindricus, cartilagineus, glaber, albo-virens, 8 cm. longus, 6-7 mm. crassus.

OLD CALABAR. Growing on a lawn, *Holland*, 22.

A very fine and well marked species, most nearly allied to *C. bibulosa*, *Massee*.

Lepiota Johnsonii, *Massee* (sp. nov.). *Pileus* subcarnosus, e convexo expansus, flocculoso-squamulosus, lateritius, squamulis obscurioribus, 3 cm. latus. *Lamellæ* liberæ, confertæ, subventricosæ, albæ. *Sporæ* ellipsoideæ, hyalinæ, glabræ, 8 \times 5 μ . *Stipes* fistulosus, æqualis, subflexuosus, 5 cm. longus, 2 mm. crassus, pileo concolor; annulus inferus, fugax, albidus.

GOLD COAST. Aburi. Growing on damp soil in the bush, *Johnson*, 4.

Allied to *L. martialis*, *Cooke & Massee*; differing in the larger size of every part, and in the broadly elliptical spores.

Mycena sphærospora, *Massee* (sp. nov.). *Pileus* campanulatus, siccus, lævis, olivaceus, 4-6 mm. latus. *Lamellæ* annexæ, angustæ, subdistantes, albido-olivaceæ. *Sporæ* hyalinæ, globosæ, verruculosæ, 4 μ diam. *Stipes* filiformis, basi incurvatus, pileo concolor, 2-3 cm. longus.

OLD CALABAR. On the ground under dense bush, *Holland*, 12.

A minute species distinguished at once amongst known species by the perfectly spherical minutely warted spores.

Pleurotus macilentus, *Massee* (sp. nov.). *Pileus* flaccidus, tenuissimus, flabelliformis, margine interdum lobatus, albo-flavidus,

glaber, striatus, 4-5 cm. latus. *Lamellæ* latæ, subconfertæ, albidæ, postice abrupte attenuatæ. *Sporæ* ellipticæ, 9-10 × 6 μ . *Stipes* lateralis, brevis, 3-8 mm. longus crassusque.

OLD CALABAR. On dead wood, *Holland*, 6.

Exceedingly thin and delicate in texture, pileus translucent, dry. Allied to *P. virginalis*, Berk.

Marasmius spaniophyllus, Berk. in Hook. *Lond. Journ. Bot.* ii., (1843), p. 631.

GOLD COAST. On a dead branch, Akim Forest, near Aburi, *Johnson*, 35.

Xerotus papyraceus. Berk. in Hook. f., *Flor. Tasm.* (1860), p. 250. OLD CALABAR. On rotten wood, *Holland*, 17.

Flammula sapinea, Karsten, *Skand. Hatts.* I. (1879), p. 410.

GOLD COAST. On decayed wood, Botanic Gardens, Aburi, *Johnson*, 4.

Psilocybe citrina, Massee (*sp. nov.*). *Pileus* primo subglobosus, margine stipite contiguo subinvolutus, dein campanulato-expansus, submembranaceus, lævis, glaber, læte citrinus, 3 cm. latus. *Lamellæ* confertæ, attenuato-annexæ, latæ, purpureo-brunneæ. *Sporæ* oblique ovoideæ, glabræ, purpureo-brunneæ, 7 × 4 μ . *Stipes* teres, lævis, glaber, pileo concolor, 4 cm. longus, 3 mm. crassus.

GOLD COAST. On the ground, Botanic Gardens, Aburi, *Johnson*, 3, with fig.

A fine and well marked species, characterised by the clear citron yellow colour of the pileus and stem.

Panus conchatus, Fries, *Epicr.* (1836), p. 398.

GOLD COAST. On dead wood, Botanic Gardens, Aburi, *Johnson*, 14.

Panus torulosus, Fries, *Epicr.* (1836), p. 397.

GOLD COAST. On the ground, attached to buried wood, Botanic Gardens, Aburi, *Johnson*, 21.

Trogia hispida, Massee (*sp. nov.*). *Pileus* orbicularis, conchiformis, resupinatus, membranaceus, dorsi centro affixus, brunneus, hispidus, 2-3 mm. latus. *Lamellæ* centro radiantes, confertæ, angustissimæ, acie incrassatæ. *Sporæ* ellipsoidæ, subhyalinæ, 5 × 3 μ .

GOLD COAST. On dead twigs, Akim Forest, near Aburi, *Johnson*, 50.

Allied to *T. Alni*, Peck; differing in the hispid pileus and very narrow crowded gills.

Lenzites applanata, Fries, *Epicr.* (1836), p. 404.

GOLD COAST. On dead wood, Akim Forest, near Aburi, *Johnson*, 49.

Lentinus flavidus, *Massee* (*sp. nov.*). *Pileus* cyathoides, membranaceo-coriaceus, 5–8 cm. diam., albido-flavescens, glaber, margine incurvus, striatulus. *Lamellae* angustae, confertae, attenuato-decurrentes, acie integrae. *Sporae* ellipticae, $10 \times 4 \mu$. *Stipes* rectus, densissime velutino-hispidulus, brunneus, 2 cm. longus, 1 cm. crassus, e sclerotio subgloboso 4–5 cm. diam., extus glabro castaneo-fusco intus albido enascens.

OLD CALABAR. Among decaying vegetable matter, *Holland*, 5.

Separated from all known species by the yellowish-white pileus, dark hispid stem and chestnut-coloured sclerotium.

Lentinus blepharodes, *Berk. et Curt.* in *Journ. Linn. Soc. (Bot.)* x. (1869), p. 301.

GOLD COAST. On dead wood, Akim Forest, near Aburi, *Johnson*, 15.

Lycoperdon excipuliforme, *Vitt.*, *Monog. Lycop.* (1842), p. 193.

OLD CALABAR. On naked ground, *Holland*, 11.

Polyporus Hollandii, *Massee* (*sp. nov.*). *Pileus* unguolato-dimidatus, postice latissime adnatus, plus minusve decurrens, effusus, 5–6 cm. latus, 10–12 cm. longus, superne laevis, azonus, glaberrimus, laete citrinus. *Hymenium* e tubulis albis brevissimis, ore minuto rotundo dense stipatis compositum. *Caro* crassa, compacto-elastica, alba.

OLD CALABAR. On a trunk, *Holland*, 21.

Allied to *P. betulinus*, *Fries*; differing in the bright lemon-yellow pileus, and more broadly effused and decurrent attachment to the matrix.

Polyporus lucidus, *Fries*, *Syst. Myc.* i. (1821), p. 353.

GOLD COAST. On dead wood, Akim Forest, near Aburi, *Johnson*, 19, 22.

Polyporus arcularius, *Fries*, *Syst. Myc.* i. (1821), p. 342.

OLD CALABAR. On dead wood, *Holland*, 14.

Fomes lucidus, *Fries*, *Nov. Symb. Myc.* i. (1851), p. 61.

OLD CALABAR. On dead wood, *Holland*, 1.

Polystictus nigripes, *Massee* (*sp. nov.*). *Pileus* cyathoides-infundibuliformis, carnosus-membranaceus, lentus, laevis, glaber, pallide ochraceus, margine membranaceo integro undulatus. *Tubuli* minuti, pileo pallidiores, ore rotundato-angulato, circa 200μ diam. *Sporae* ellipsoideae, hyalinae, $7 \times 4 \mu$. *Stipes* erectus, aequalis, 1–5 cm. longus, 2–5 mm. crassus, cute crustacea atra.

GOLD COAST. On dead wood, Botanic Gardens, Aburi, *Johnson*, 23.

Allied to *P. xanthopus*, *Fries*.

Polystictus tabacinus, *Sacc.*, *Syll.* vi. (1888), p. 280.

GOLD COAST. On dead wood, Akim Forest, near Aburi, Kibbi, *Johnson*, 11.

Polystictus membranaceus, *Sacc., Syll.* vi. (1888), p. 287.

GOLD COAST. On dead wood, Akim Forest, near Aburi, *Johnson*, 12.

Polystictus chrysites, *Sacc., Syll.* vi. (1888), p. 248.

GOLD COAST. On dead wood, Akim Forest, near Aburi, *Johnson*, 45.

Polystictus rigidus, *Sacc., Syll.* vi. (1888), p. 271.

GOLD COAST. On dead wood, Akim Forest, near Aburi, *Johnson*, 17, 44.

Polystictus occidentalis, *Cooke in Grevillea*, xiv. (1886), p. 85.

GOLD COAST. On rotten wood, Aburi, *Johnson*, 10.

Polystictus xanthopus, *Fries in Nov. Act. Soc. Sci. Upsal.* i. (1851), p. 74.

GOLD COAST AND OLD CALABAR. On branches, Akim Forest, near Aburi, *Johnson*, 27. Old Calabar, *Holland*, 19.

Polystictus versicolor, *Fries, Syst. Myc.* i. (1821), p. 368.

GOLD COAST. On dead branches, Akim Forest, near Aburi, *Johnson*, 43.

Polystictus sanguineus, *Fries in Nov. Act. Soc. Sci. Upsal.* i. (1851), p. 75.

GOLD COAST. On dead trunks, Akim Forest, near Aburi, *Johnson*, 26.

Polystictus Persoonii, *Cooke in Grevillea*, xiv. (1886), p. 85.

GOLD COAST. On dead wood, Akim Forest, near Aburi, *Johnson*, 29, 31.

Favolus tessulatus, *Mont., Syll. Crypt.* (1856), p. 556.

GOLD COAST. On dead wood, Botanic Gardens, Aburi, *Johnson*, 39.

Laschia tremellosa, *Fries, Summa. Veg. Scand.* (1849), p. 325.

OLD CALABAR. On dead wood, *Holland*, 12.

Stereum hirsutum, *Fries, Epicr.* (1836), p. 549.

GOLD COAST. On dead wood, Botanic Gardens, Aburi, *Johnson*, 34.

Lachnocladium cartilagineum, *Berk. & Curt. in Journ. Linn. Soc. (Bot.)* x. (1869), p. 330.

GOLD COAST. On dead wood, Botanic Gardens, Aburi, *Johnson*, 38.

Cyphella lilacina, *Massee (sp. nov.)*. *Pileus* subsessilis, campanulatus, erectus, tenuis, membranaceo-tenacellus, margine primo involutus, undulatus, 0.5–1 mm. diam. et alt., extus dense tomentoso-pubescent, pilis continuis 50–60 × 5–6 μ succineis, hymenio lævissimo lilacino-albescente. *Sporae* ellipticae, lilacinae, 8 × 5–5.5 μ .

GOLD COAST. On a dead herbaceous stem, Botanic Gardens, Aburi, *Johnson*, 57.

Densely gregarious; extremely pilose, the hairs often covered with a deposit of lime, giving to the surface a frosted aspect. Allied to *C. albo-violascens*, Weinm.

Pistillaria Johnsonii, *Massee* (*sp. nov.*). *Sporophora* tota candida; clavulæ simplices, erectæ, lævissimæ sursum albo-pruinosa, in sicco longitudinaliter rugosæ, filiformes. superne clavulata, 2 mm. alt. *Sporæ* ellipsoideæ, hyalinæ, $2 \times 1 \mu$.

GOLD COAST. On a dead herbaceous stem, Botanic Gardens, Aburi, *Johnson*, 82.

Gregarious; allied to *P. puberula*, Berk.

Hirneola auriformis, *Fries*, *Fungi Natal.* (1848), p. 26.

OLD CALABAR. On living bark of Avocado pear, *Persea gratissima*, Gært., *Holland*, 3.

Tremella fuciformis, *Berk.* in *Hook Kew Journ. Bot.* viii. (1856), p. 277.

GOLD COAST AND OLD CALABAR. On rotten wood, Botanic Gardens, Aburi, *Johnson*, 7. Old Calabar, *Holland*, 13.

Xylaria Chamissonis, *Sacc.*, *Syll.* i. (1882), p. 345.

GOLD COAST. On dead wood, Akim Forest, near Aburi, *Johnson*, 24.

Xylaria scopiformis, *Mont.* in *Ann. Sci. Nat.* xiii. (1840), p. 349.

GOLD COAST. On dead wood, Botanic Gardens, Aburi, *Johnson*, 48.

Xylaria rhopaloides, *Mont.* in *Ann. Sci. Nat.* iii. (1855), p. 99.

GOLD COAST. On dead wood, Botanic Gardens, Aburi, *Johnson*, 33.

Xylaria tabacina, *Berk.* in *Hook. Journ. Bot.* vi. (1854), p. 225.

GOLD COAST. On dead wood, Botanic Gardens, Aburi, and Akim Forest, *Johnson*, 18, 32.

Hypoxyton annulatum, *Mont. Syll. Crypt.* (1856), p. 213.

GOLD COAST. On dead bark, Botanic Gardens, Aburi, *Johnson*, 81.

Haplosporella violacea, *Massee* (*sp. nov.*). *Perithecia* globosa, atra, in stromate atro pulvinato erumpente aggregata. *Sporulæ* ellipticæ vel rotundatæ, sordide violaceæ, glabræ, continuæ, $18-22 \times 10-12 \mu$, in sterigmatibus conicis hyalinis acrogenæ.

GOLD COAST. On dead bark, Botanic Gardens, Aburi, *Johnson*, 36, 52.

Stroma black, bursting through the bark, 2-3 mm. diam. Distinguished from allied species by the violet spores. Allied to *H. chlorostroma*, *Speg.*

Daldinia concentrica, *Cesati, Schema Sferic. Ital.* (1863), p. 197.
GOLD COAST. On dead wood, *Kofridua*, *Johnson* 16.

Diatrype caminata, *Kalchbr. & Cooke in Grevillea*, ix. (1880), p. 28.

GOLD COAST. On a decorticated branch, Botanic Gardens, *Johnson*, 76.

Auerswaldia maxima, *Massee (sp. nov.)*. *Stromata* disciformia, erumpentia, rotundata seu irregularia, atra, opaca, multilocularia 1-2 cm. lata. *Loculi* dense congesti, immersi. *Asci* cylindracei, octospori, $120 \times 10 \mu$. *Spore* monostichæ, ellipsoideæ, continuæ, brunneæ, opacæ, $12 \times 6-7 \mu$.

GOLD COAST. On dead branches, Botanic Gardens, Aburi, *Johnson*, 58.

Allied to *A. disciformis*, Winter; differing in the broadly effused stroma and smaller spores.

Nectria verrucosa, *Massee (sp. nov.)*. *Perithecia* in pulvinulos hemisphæricos 2-3 mm. diam. conferta, globosa, incarnata, verrucosa, ostiolo papillato. *Asci* cylindracei, octospori, aparaphysati, $60 \times 8 \mu$. *Spore* ellipticæ, utrinque rotundatæ, medio 1-septatæ vix constrictæ, loculis 1-guttulatis æqualibus hyalinæ, læves, $10 \times 6 \mu$.

GOLD COAST. On dead bark, Botanic Gardens, Aburi, *Johnson*, 74.

A neat species characterised by the warted flesh-coloured perithecia. Allied to *N. rimicola*, *Cooke*.

Sphærostilbe cinnabarina, *Tul., Sel. Fung. Carp.* iii. (1865), p. 103.

GOLD COAST. On dead bark, Botanic Gardens, Aburi, *Johnson*, 41, 66, 68, 69, 77, 78.

Hysterium vermiforme, *Massee (sp. nov.)*. *Perithecia* superficialia, gregaria, atra, carbonacea, lineari-elongata seu vermiformia, utrinque acutiuscula, medio rima longitudinali percursa, 2-4 mm. longa, 0.5 mm. lata, transverse striatula. *Asci* cylindracei apice truncato-rotundati, octospori. *Spore* 1-seriatæ, cylindraceo-ellipsoideæ, utrinque obtusiusculæ, triseptato-constrictæ, brunneæ, $35-40 \times 12-14 \mu$. *Paraphyses* filiformes.

GOLD COAST. On dead branches still covered with bark, Botanic Gardens, Aburi, *Johnson*, 69.

A very fine species, allied to *H. eumorphum*, *Sacc.*

Schizothyrium melanoplacum, *Sacc., Syll.* ii. (1883), p. 726.

GOLD COAST. On living leaves of *Justicia flava*, Vahl, Aburi, *Johnson*, 54.

Bulgaria turbinata, *Massee (sp. nov.)*. *Ascomata* turbinata, atra, extus granulata, glabra, 2-4 mm. lata; substantia subparenchymatica. *Asci* clavati, octospori, apice iodo haud tincti, $120 \times 18-20 \mu$. *Spore* ellipticæ, utrinque obtusissimæ, glabræ, olivaceo-brunneæ, $17-20 \times 10-12 \mu$. *Paraphyses* filiformes.

GOLD COAST. On rotten wood, Botanic Gardens, Aburi, *Johnson*, 70, 78.

Densely crowded, and often irregularly angular from mutual pressure. At first broadly turbinate, the apex becoming plane as the disc gradually develops. Somewhat elastic when moist, contracting and irregularly wrinkled when dry. Readily distinguished from all known species by the very large spores and the small ascophore.

Trichoscypha Hindsii, *Cooke*, *Mycogr.* (1879), p. 252, pl. 51, fig. 200.

GOLD COAST. On dead branches, Botanic Gardens, Aburi, *Johnson*, 47, 51.

Helminthosporium Coffeæ, *Massee* (*sp. nov.*). *Maculae* nullæ. *Hyphæ* epiphyllæ, velutinæ, plagas effusas nigro-olivaceas efficientes; fertiles densissime aggregatæ, basi connatæ, erectæ, cylindraceæ, rectæ vel flexuosulæ, septatæ, sursum nodulosæ, olivaceo-brunneæ, $300-400 \times 7-8 \mu$. *Conidia* obovata, 3-5-septata, nec constricta, pallida, $45-55 \times 8-10 \mu$.

GOLD COAST. On leaves of *Coffea liberica*, Hiern, Botanic Gardens, Aburi, *Johnson*, 8.

Allied to *H. paraguayense*, Speg.

Dendryphium effusum, *Massee* (*sp. nov.*). *Maculae* amphigenæ, pannoso-effusæ, olivaceo-atræ. *Hyphæ* repentes intricato-ramosæ, sursum suberectæ, dilute olivaceæ, sparse septatæ, $7-8 \mu$ crassæ. *Conidia* ex apicibus hypharum producta, elongato-clavata, episporio lævi, 11-19-septata, $150-200 \times 9-12 \mu$, dilute olivacea.

GOLD COAST. On dead branches, Botanic Gardens, Aburi, *Johnson*, 71.

Surrounding dead branches with a dense felt-like layer. Allied to *D. toruloides*, Sacc.

Stilbum albipes, *Massee* (*sp. nov.*). *Stromata* dense aggregata, erecta, recta, cylindracea, alba, superne in capitulo globoso-flavo expansa 0.5 mm. alta; hyphæ capituli graciles, irregulariter ramulosæ, $2-3 \mu$ crassæ. *Conidia* elliptica, hyalina, utrinque obtusa, $2 \times 1 \mu$.

GOLD COAST. On bark, Botanic Gardens, Aburi, *Johnson*, 65, 67.

Allied to *S. connatum*, Kalchbr. and Cooke.

Isaria acervata, *Massee* (*sp. nov.*). *Stromata* dense aggregata, erecta, 1 mm. alta, grisea, supra ob apices hypharum undique divergentes tomentosa; ramulis subverticillato-ramulosis. *Conidia* in hypharum apicibus denticulatis acrogena, elliptica, hyalina, $3 \times 2 \mu$.

GOLD COAST. On dead wood, Botanic Gardens, Aburi, *Johnson*, 59, 64.

Allied to *I. coralloidea*, Kalchbr. & Cooke,

Fusarium heterosporum, Nees in *Nat. Act. Cur.* ix. (1818), p. 213, tab. v. fig. 5.

GOLD COAST. On guinea grain, *Pennisetum typhoideum*, Rich., Krobo Plain, Johnson, 42.

A well known destructive parasite of cereals in Europe and America.

SOUTH AFRICA.

ASCOMYCETES.

Phyllachora Graminis, Fuckel, *Symb. Myc.* (1869), p. 216.

NATAL. On fading leaves of *Melinis minutiflora*, Beauv., Umpumuto Hills, 2,000 ft., Buchanan, 299.

UREDINEÆ.

Uromyces Bolusii, Massee (*sp. nov.*). *Acervuli* epiphylli, innato-prominuli, compacti, brunneo-cinnamomei, sæpe ob confluentiam lineares, diu epidermide albicanti tecti. *Teleutospore* ellipticæ, episporio lævissimo sursum valde incrassato et in mucronem papillæformem producto, $29-35 \times 24-26 \mu$, pallide brunneæ, stipite longissimo ($125-160 \times 7-8 \mu$), hyalino suffultæ.

CAPE COLONY. On living leaves of *Aspalathus pachyloba*, Benth., Montagu Bath, Bolus, 7597.

Allied to *U. junci*, Tal.; differing in the larger spores and much longer pedicel.

Puccinia pallida, Massee (*sp. nov.*). *Maculæ* amphigenæ determinatæ pallescentes. *Acervuli* hypophylli, centro macularum insidentes, 6-10-aggregati, erumpentes, intense fusco-ferruginei. *Teleutospore* anguste lanceolatæ, lævissimæ, apice incrassatæ, stramineæ, $50 \times 15-16 \mu$. *Stipes* crassiusculus, basi subattenuatus hyalinus.

NATAL. On leaves of a species of *Orthosiphon*, Van Reenen's Pass, Drakensberg, Wood, 5701.

The teleutospores are straw-colour and readily separate into two portions along the median septum as in *P. dissiliens*, Cooke, to which the present species is allied.

ARGENTINA.

HYPHOMYCETES.

Heterosporium Calandrinia, Massee (*sp. nov.*). *Acervuli* effusi, amphigeni, maculas pulvinatas irregulares pallido-olivascens formantes. *Hyphæ* repentes, intricato-ramosæ, laxè remoteque septatæ, sursum suberectæ, simplices, dilute olivaceæ. *Conidia*

elongato-elliptica, utrinque rotundata apice sæpe papillata, episporio asperulata, 1-3-septata, dilute olivacea, 15-25 \times 7-10 μ .

ANDES OF MENDOZA. On the inflorescence of *Calandrinia potentilloides*, C. Gay, Puente del Inca, 9170 ft., *Gosse*, 13.

Allied to *Heterosporium Atronicæ*, Harkness, differing more especially in the paler colour and finer granulation of the epispore.

V.—MISCELLANEOUS NOTES.

Retirement of Curator.—It will be a matter of genuine regret to all acquainted with Kew that Mr. George Nicholson, F.L.S., was compelled by impaired health to retire on July 31 from the post of Curator of the Royal Botanic Gardens. Mr. Nicholson entered the Curator's office on February 15, 1873, after a public competition. In 1886, on the retirement of the preceding Curator, the late Mr. John Smith, Mr. Nicholson was appointed by the Treasury to succeed him.

Mr. Nicholson's services to Kew are well known. To him in great measure is due the present efficient condition of the Arboretum. The *Hand list of Trees and Shrubs grown in Arboretum* was prepared by him, and is universally accepted as a standard authority for their nomenclature. Kew still hopes to retain the benefit of Mr. Nicholson's botanical experience now that he has been relieved from the pressure of administrative duties.

New Curator.—The First Commissioner has filled the vacancy created by Mr. Nicholson's retirement by the appointment of the Assistant Curator, Mr. William Watson. This officer entered the service of Kew in 1879 as Foreman. In 1886 he was raised to the position of Assistant Curator, in charge of the indoor cultivation; this, as Curator, he will still retain. Mr. W. J. Bean, the Assistant Curator in charge of the Arboretum, will now take the general charge of the grounds and of the ligneous collections.

Hon. David Carnegie.—This gentleman, to whom Kew is indebted for a small collection of dried plants, gathered on his exploring expedition across the unknown desert of North-west Australia in 1896, was appointed Assistant Resident of the Middle Niger in 1899. He there soon made a reputation as a leader and organiser, and gained the respect and devotion of the natives. Unfortunately this promising life was cut short in an encounter with a refractory tribe. He was leading a small party when he was struck by a poisoned arrow in the thigh, and died 15 minutes later, on November 27, 1900. His behaviour in this affair so inspired his followers with courage that they secured his body and fought their way back through a most difficult country. Mr. Carnegie was the youngest son of the Earl of Southesk, and was born in

London in 1871. It was his intention to devote such time as he could spare to the elucidation of the vegetable products of the Niger Protectorate. He wrote an excellent account of his explorations in Australia under the title of *Spinifex and Sand*; and his name is commemorated in botany by *Dicrastylis Carnegiei*, Hemsl., *Hooker's Icones Plantarum*, plate 2582. This plant, which "has a perfume resembling lavender," was found on the steep sides of sand-ridges over an area covered by two or three days' travel.

Dr. Peter Cormack Sutherland.—The death, from pneumonia, of this old correspondent of Kew is announced by the *Natal Mercury* as having taken place at his residence in Durban, Natal, on November 30th, 1900. The Colony has lost in him one of its ablest scientific men.

Dr. Sutherland was born at Latheron, in Caithness, Scotland, in 1822. His parents were poor, and they emigrated to Nova Scotia when he was eight years of age. After a few years they returned to their native village in Scotland, where the lad Peter was educated until twenty years of age, when he entered King's College, Aberdeen, and graduated there in medicine in his twenty-fifth year. It was whilst still a student that he embarked on his first scientific mission; this was to the West Coast of Africa, to report upon guano, at that time coming into use as a manure. Afterwards, between 1845 and 1847, he made two voyages to the Arctic regions, and then settled down to practice as a medical man in Tyrie, New Pitsligo, and Aberdeen until 1850, when he joined Captain Penny's expedition in search of Sir John Franklin. During this voyage he made a collection of Algæ and Lichens, which he sent to Sir William Hooker in 1851, and thus commenced his correspondence with Kew. In 1852 he again went to the Arctic regions, under Captain Inglefield, on a fresh expedition in search for Sir John Franklin. This voyage resulted in his sending to Kew some seeds and living plants from N. lat. 69°, and collections of dried plants from higher latitudes; besides which he also made geological and zoological collections. At this period he had a desire to enter Government service, but as his age prohibited this, on the recommendation of influential friends, he went to Natal, where he arrived in the autumn of 1853. Here his ability and merits were soon recognised, for after a few months' residence he was appointed Government Geologist to the Colony of Natal. In 1855 he was promoted to the post of Surveyor-General, which he held until 1887, when he retired upon a well-earned pension. During his career in Natal he held a number of responsible public positions, and was elected at Maritzburg as a member of the Legislative Council. The Right. Hon. C. J. Rhodes was placed by his father, in 1871, in the charge of Dr. Sutherland, with whom he resided several months.

Dr. Sutherland's chief study was geology, but botany also received a share of his attention, and he was one of the founders of the Natal Botanic Society. For many years he corresponded with Kew, and contributed a very large number of dried and living plants from Natal, Pondoland, and the Transvaal. Among

plants his name will be perpetuated in *Greyia Sutherlandii*, whilst geographically Mount Sutherland, a peak of the Drakensberg Range, will keep his memory green in the minds of Colonists.

Captain M. S. Wellby.—Among the victims of the South African war is this comparatively young and intrepid officer and explorer. Though best known as a geographer, he paid attention to Natural History, and Kew is indebted to him for some small but interesting botanical collections. Born in 1866, and educated at Rugby and Sandhurst, he received his commission as Lieutenant in the 18th Hussars in 1886, becoming Captain in 1894, and Adjutant of his regiment in 1897. His first expedition was to Somaliland, in 1894, but his most arduous and most important journey was across Tibet, from west to east, mainly between lat. 35° and 36°, which was accomplished in company with Lieutenant (now Captain) Malcolm in 1896. In spite of all difficulties, a very carefully labelled collection of dried plants was made and presented to Kew. A preliminary list, furnished by Kew, was published in Wellby's *Through Unknown Tibet*, and a more complete elaboration of the collection will appear in Mr. W. B. Hemsley's shortly forthcoming paper on the flora of Tibet, in the *Journal of the Linnean Society*. In 1897 Captain Wellby served with distinction in some military operations on the north-west frontier of India. In 1898-9 he made an expedition through Abyssinia to Lake Rudolf, and formed a collection of dried plants, which he presented to Kew. This collection has not yet been worked out. Shortly after his return from Abyssinia he was ordered to join his regiment in South Africa. He passed through the whole siege of Ladysmith, and was subsequently attached to General Sir Redvers Buller's force in the Transvaal. On July 30th, 1900, he was wounded in an engagement at Mertzicht, and died at Paardekop on August 5th. Most of the foregoing particulars were extracted from the *Geographical Journal*. It is gratifying to be able to add that Captain Malcolm, though grievously wounded at Paardeberg, is at length convalescent.

Botanical Magazine for June.—*Crinum rhodanthum* is a recently-described species from Ngami Land, British Central Africa, where it was discovered by Captain and Mrs. Lugard, from whom Kew received a bulb and herbarium specimens. Its flowers are pale red, and are borne in lax umbels nearly two feet in diameter. *Beschorneria Wrightii*, supposed to be a native of Mexico, is a new species most nearly allied to *B. dekosteriana*. The Kew plant has a stem 18 inches high; its leaves are about five feet long, and it bore a panicle eight feet high of green-yellow flowers. It is growing in the Mexican House at Kew, and flowered in June, 1900. *Calanthe madagascariensis* is closely allied to *C. veratrifolia*, figured at plate 2615, but differs in size, in the undulate leaves, and in the much broader sepals and petals. The flowers usually have white sepals and petals, clouded with pink,

and a rose-purple lip; sometimes, however, the sepals and petals are pure white and the lip yellow. A specimen of this species was presented to Kew by Mr. Warpur, a Belgian collector. *Nymphæa flavo-virens* resembles the Mexican *N. gracilis*, and is probably a native of the same country. Its flowers are white with golden-yellow stamens. The Kew plant was obtained from Mr. W. N. Pike, of the Floral Park, New York.

Botanical Magazine for July.—*Rhododendron ciliicalyx* is one of the numerous plants discovered in China by the late Abbé Delavay, who sent seeds to the Jardin des Plantes, Paris, whence a plant was received at Kew in 1892. It has large flowers, white, or white suffused with rose, and resembles very closely the Indian *R. formosum*, differing in its robustness, larger flowers, and in having long cilia on the lobes of the calyx. *Chelonopsis moschata* is a handsome Labiate from Japan and China. The genus consists of only two species, and is allied to the North American *Physostegia*, and *Melittis*. The specimen drawn was raised from seeds sent to Kew by A. K. Bulley, Esq., of West Kirby. *Iris chrysantha* is a new species belonging to the section *Pogoniris*, and is characterised by having narrow leaves, a long peduncle with a single cluster of large pale yellow flowers, large spathe-valves, and a short perianth-tube. A specimen was sent to Kew by Mr. R. I. Lynch, of the Cambridge Botanic Garden. Its native country is not definitely known, but it is probably Persia. The Abyssinian *Cyanotis hirsuta* has edible tuberous roots, called Burko by the natives. Some tubers were presented to Kew by A. B. Wylde, Esq., the Abyssinian traveller. *Impatiens chrysantha* is a new species from the Western Himalaya and is closely allied to *I. Edgeworthii*. The Kew plants were raised from seeds received from J. F. Duthie, Esq., Director of the Botanical Department of Northern India.

Botanical Magazine for August.—*Bulbophyllum grandiflorum* was discovered in New Guinea nearly three-quarters of a century ago, but it is of comparatively recent introduction into cultivation, a plant having flowered for the first time in Sir Trevor Lawrence's collection in 1895. Allied to *B. Cominsii*, from the Solomon Islands, it differs in having a much larger flower, the curious colour of which recalls that of the pitchers of some Sarracenias; its sepals are very large, contrasting remarkably with the minute petals. The Kew plant was purchased from Messrs. Sander & Co. in 1898. *Pæonia lutea* is a native of the mountains of Yunnan, where it was discovered by the late Abbé Delavay. Its most noteworthy characters are a woody stem, in which it resembles the Chinese *P. Moutan*, and yellow flowers. The plant drawn was received from the Jardin des Plantes, Paris, and flowered in the Temperate House in June, 1900. *Helichrysum Gulielmi* grows on Mount Kili-manjaro, in German East Africa, at elevations of 5,000 to upwards of 9,000 feet. It is a handsome plant, having white woolly stems and leaves, and flower-heads with white

bracts, sometimes rose-red on the outer surface. The specimen from which the drawing was made was received from W. E. Gumbleton, Esq., of Belgrove, co. Cork. *Strobilanthes gossypinus*, from the Nilghiri Hills, was raised from seed sent by the late Mr. Jamieson, of Ootacamund, in 1887, and flowered in the Mexican division of the Temperate House in 1900. The fine *Gladiolus sulphureus* is a native of the Transvaal, and was obtained by Kew from Mr. Max Leichtlin, of Baden.

Flora capensis.—The first part of the fifth volume of this work, edited by the Director, has been published. It contains the elaboration of the *Acanthaceae* by Mr. C. B. Clarke, F.R.S., that of the *Myoporineae* and *Selagineae* by Mr. R. A. Rolfe, A.L.S., and of the *Verbenaceae* by Mr. H. H. W. Pearson, F.L.S.

Flora of Tropical Africa.—Parts I. & II. of the eighth volume of this work have been published. They contain the monocotyledonous orders from *Pontederiaceae* to the first instalment of *Cyperaceae*.

Flora of the Presidency of Bombay.—The first part of this work, extending to the end of *Rutaceae*, has been published. It has been prepared at Kew, under the authority of the Secretary of State for India in Council, by Dr. Theodore Cooke, C.I.E., F.L.S., formerly Principal of the College of Science at Poona and Director of the Botanical Survey of Western India.

Caá-êhé or azucá-caá.—Early in the present year Mr. Cecil Gosling, H.B.M. Consul at Asuncion, Paraguay, sent to Kew a fragmentary specimen of a composite plant with the following information:—

I beg to enclose herewith some leaves of a plant which has lately been discovered in Paraguay by Dr. Bertoni, an Italian botanist, and Director of the Agricultural College here. This plant, which has probably been known to the Indians since a hundred years or more and whose secret has as usual been so faithfully guarded by them, grows in the Highlands of Amambai and near the source of the River Monday, not being, it is said, found further south than this. It is a modest shrub growing side by side with the weeds and luxuriant grasses of that district and only attains a height of a few inches. The leaves are small and the flowers still more diminutive, and the Indians call it *Caá-êhé*, meaning sweet herb, because of its sweetness, a few leaves being sufficient to sweeten a strong cup of tea or coffee, giving also a pleasant aromatic flavour. Its discoverer does not, however, believe that the *Caá-êhé* bears any relation to the saccharine properties of

sugar, and he has named it after Professor Ovidio Rebaudi, of Asuncion, *Eupatorium rebaudianum*, the botanical description being as follows :—

“Capitula corymbulosa parvula, 1-4-flora, corymbulis laxè paniculatis. Involucrum cylindraceo-oblongum, bracteis biserialis subæqualibus. Receptaculum planum. Corollæ anguste paniculatae tubo breviter quinquilobo. Styli rami superne parum incrassati. Pappi setæ breviter barbellatae. Achænia glabra.

Herba annua erecta, caule gracile piloso simplice vel parum ramoso, long. 0,20-0,40 m. Folia opposita inconspicua pilosula scabra subdentata oblonga, apice obtusa, basi cuneiformia vel attenuata, petiolo brevi. Corymbulorum pedunculi et pedicelli gracillimi, bracteis bracteolisque elongato-linearibus. Flores subalbidi parvi. Habitat in pratis siccis q. lomas altas apellantur, atque, etsi rare, in cultis relictis silvæ virginis regionis Amambai usque ad fluminem Monday.

Planta succo dulcissimo farta, ut videtur rara. Vulgo *caá-éhé* vel *azucá-caá*, idest herba dulcis vel herba saccharata.”

In an article describing the plant Dr. Bertoni remarks, I think with great justice, to what extent we are indebted to those close observers of nature, the Indians, from whom we have learnt the use of tobacco, cocoa, maize, mani, manioc, potatos, cotton, quinine, vanilla, rubber, and sarsaparilla. Truly a long list of benefits to mankind ! I am told also that Dr. Bertoni has lately discovered a tree whose sap is alcoholic and similar in taste and colour to a rough red wine, being used as such by the Indians.

Subsequently Mr. Gosling sent a copy of the *Revista de Agronomía*, ii., pp. 35-37 (1899), where the description reproduced above was published. There is no doubt that the plant possesses very strongly the power of stimulating the sensation of sweetness, for the smallest piece of a leaf causes a persistent sweetness in the mouth. We have not succeeded in identifying the fragments sent with any plant in the Kew Herbarium ; but from the floral structure it belongs to *Stevia* rather than *Eupatorium*, and its affinity is with *S. collina*, Gard.

Castilloa markhamiana.—As pointed out in *Hooker's Icones Plantarum*, in the text relating to *Castilloa Tunu*, Hemsl. (plate 2651), this name has been applied to two very different plants ; and, as the confusion is continued in the most recent writings on caoutchouc, it may be useful to repeat the explanation here. *Castilloa markhamiana*, Collins (*Report on Caoutchouc*, p. 12. t. 3), as suggested by Bentham and Hooker (*Genera Plantarum*, iii., p. 372), is a species of *Perebea*, very closely allied to the original *P. guianensis*, Aubl., and should bear the name *P. markhamiana*. *Castilloa markhamiana* of Markham's *Peruvian Bark*, p. 453, and of cultivators, is not distinguishable from *C. elastica*, Cerv., to which also, judging from the description and all the specimens of *Castilloa* received from Costa Rica, *C. costaricana*, Liebm., belongs.—W. B. H.
